

Memorandum

To: Erin McDonnell, Oregon Department of Environmental Quality

Copies: Jim Orr and David Lacey, Oregon Department of Environmental Quality
Richard Francis, U.S. Environmental Protection Agency
Mat Cusma, Radius Recycling

From: Allison Geiselbrecht and Amanda McKay, Floyd|Snider

Date: January 10, 2024

Project No: SSI-BIP DEQ

Re: **Wheel Wash Station Effectiveness Monitoring Plan, Burgard Industrial Park Source Control Project, Portland, Oregon, ECSI #5324**

This memorandum presents the Wheel Wash Station Effectiveness Monitoring Plan (Monitoring Plan) for the wheel wash station currently being installed at the Schnitzer Steel Metals Recycling Yard (SSMRY) located at 12005 N Burgard Way, within the Burgard Industrial Park (BIP) in Portland, Oregon. This Monitoring Plan describes the planned monitoring activities that will be implemented following the completion of the wheel wash installation to evaluate the effectiveness of the wheel wash station.

INTRODUCTION

Radius Recycling, formerly operating as Schnitzer Steel Industries, Inc. (Schnitzer), previously submitted a Memorandum dated April 5, 2021 (Schnitzer 2021) requesting Oregon Department of Environmental Quality (ODEQ) approval for the installation of the wheel wash system as a source control measure (SCM) at the SSMRY. ODEQ approved the wheel wash pre-design and location via email on May 10, 2021.

The wheel wash system is anticipated to be fully operational by the end of the first quarter of 2024. The permit set approved by the City of Portland Bureau of Development Services (BDS) is included as Attachment 1.

WHEEL WASH DESCRIPTION

Attachment 1 shows the location of the wheel wash station at the SSMRY's commercial, main scale exit. The station will resemble the installation at the Schnitzer facility in Tacoma, Washington, and consists of a galvanized drive-through washing area that flushes tires and

undercarriage of the trucks. The closed-loop system recycles water for continued use but is also connected to a water source in the event recirculation water stored in a water tank connected to the washing area needs replenishing. The system will also be connected to the sanitary sewer for potential overflows. Drivers will enter the wheel wash on a 24-foot-long grated on-ramp with an approximately 3% incline before driving onto the main washing area of approximately 24 feet in length. After the main washing area, the subsequent 50-foot-long grated area drains the wash water back into the recycling tanks for reuse. Trucks exit the wheel wash on an approximately 10-foot-long, 3% downward-sloped off-ramp.

The washing and drain areas route wash water to the recycling tanks for reuse. The recycling tanks recirculate water back to the pumping tanks where water is reused for washing. A conveyor removes accumulated sediment from the recycling tanks and deposits the sediment in waste bins for removal from the site. Accumulated sediment will be transferred into lined roll-off boxes (or similar) and transported off-site for waste disposal. Accumulated sediment will be disposed of after waste characterization per Oregon waste regulations and receiving facility requirements. Following characterization, waste will be disposed of separately from other SSMRY waste for the first year of monitoring. After the first year of monitoring, waste may be disposed of with other SSMRY waste, as allowed by the waste disposal facility.

EFFECTIVENESS MONITORING

After installation of the wheel wash station, this Monitoring Plan will be implemented for 3 years. This Monitoring Plan is considered a living document and may be updated as necessary, based on seasonal variations or change in site conditions.

Monitoring Methods

Wheel wash effectiveness monitoring will consist of three main components:

1. Recording of the volume and mass of solids accumulating in the system
2. Visual inspection of the wheel wash exit
3. Recording of the number of pump cycles, which represents the count of vehicles washed.

Recording Volume and Mass of Solids Accumulating in the System

The volume of solids removed from the system will be estimated and recorded at each instance of removal of solids. Additionally, mass of solids recorded on waste disposal tickets may be used for quantification. The required frequency of solids disposal is not known at this time but will be better understood following the first year of monitoring. Depending on the frequency of disposal, the accumulation rate may be measured as a volume per week or per month, unless low accumulation volumes make quarterly measurements more practical. The accumulation of solids is expected to fluctuate based on site operations and resulting number of trucks passing through

the wheel wash system as well as seasonal weather changes that impact the cleanliness of trucks entering the wheel wash. The 3-year monitoring period will allow Schnitzer to assess the accumulation rate to be used as a baseline for system performance into the future.

Visual Inspection of the Wheel Wash Exit

Visual inspections of the wheel wash exit will be performed per the monitoring schedule to qualitatively evaluate the effectiveness of tire and undercarriage washing. The exit area will be inspected for track out and mud/sediment accumulation. Trucks exiting will be inspected to observe potential mud/sediment on tires and tire flaps not removed by the system. A written log of visual inspections will be prepared per the visual inspection schedule and photographs will be added, as necessary. Any events during which sediment was not effectively removed will be reported.

Given the visual inspections are qualitative, there are no baseline conditions that observations may be compared to. Observations should be documented and evaluated by frequency of observations that may indicate lack of effectiveness such as presence of track out at the wheel wash exit or visible mud/sediment on truck tires leaving the wheel wash.

Recording of the Number of Pump Cycles

The number of pump cycles will be recorded on a weekly, monthly, or quarterly basis to account for the number of vehicles passing through the wheel wash. Each pump cycle represents one vehicle.

Visual Inspection Schedule

Schnitzer proposes the following visual inspection schedule:

Monitoring Year	Visual Inspection Frequency	Frequency Rationale
1	Every 2 weeks	Establish baseline effectiveness across different seasons
2	Monthly	Confirm consistency with Year 1 results
3	Quarterly	Continued observations of effectiveness

Changes to this schedule may be implemented after Year 1 of monitoring; however, visual inspections should not occur less frequently than quarterly. Following the first 3 years of reporting, Schnitzer will continue to perform quarterly visual inspections, document grit removal, characterization and disposal, and document downtime of the system for maintenance or repairs.

Reporting

Upon ODEQ approval of the Monitoring Plan, and installation and start-up of the wheel wash, the Monitoring Plan will be implemented.

Monitoring reporting to ODEQ will occur via semiannual monitoring reports. The first report will be submitted approximately 6 months after the wheel wash is fully operational. After the first 3 years of monitoring, annual reports will be submitted to ODEQ that will include quarterly visual inspection reports.

REFERENCES

Schnitzer Steel Industries, Inc. 2021. *Schnitzer Portland – Proposed Wheel Wash*. Memorandum from Mat Cusma, Schnitzer Steel, to Jim Orr and Ray Hoy, Oregon Department of Environmental Quality. 5 April.

LIST OF ATTACHMENTS

Attachment 1 Wheel Wash System Installation Permit Set

Attachment 1
Wheel Wash System Installation Permit Set

PATH: \\parametrix.com\pmx\PSO\Projects\Clients\3312-Schnitzer\3312-011 MainScaleWheelWash\985ves\CADD\DWG PLOTTED BY: SteveAnd DATE: Wednesday, July 6, 2022 8:53:17 AM LAYOUT: G2

LEGEND

- PROPERTY LOT LINE
- CHAINLINK FENCE
- WATER
- STORM DRAIN
- STORM DRAIN CATCH BASIN
- GATE VALVE
- LUMINAIRE
- POWER VAULT
- RAIL
- RECYCLE MATERIAL PILE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- ASPHALT
- CSBC
- SAWCUT
- CONSTRUCTION LIMIT
- POWER
- CATCH BASIN INSERT
- SURFACE MONUMENT
- FLOW INDICATOR

ABBREVIATIONS:

AC	ASPHALT CONCRETE	ID	INSIDE DIAMETER
AD	ALGEBRAIC DIFFERENCE	IE	INVERT ELEVATION
AP	ANGLE POINT	IN	INCH
APPROX	APPROXIMATE	JT	JOINT
ASPH	ASPHALT	MAX	MAXIMUM
AVE	AVENUE	MH	MANHOLE
BLDG	BUILDING	MIN	MINIMUM
BM	BENCH MARK	N	NORTH/NORTHING
BMP	BEST MANAGEMENT PRACTICE	OC	ON CENTER
BOW	BOTTOM OF WALL	OD	OUTSIDE DIAMETER
BT	BURIED TELEPHONE	OHWM	ORDINARY HIGH WATER MARK
CB	CATCH BASIN	P	POWER
CL	CLASS	PAVE	PAVEMENT
CL OR C	CENTERLINE	PC	POINT OF CURVE
CO	CLEAN OUT	PT	POINT OF TANGENCY, POINT
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
CP	CULVERT PIPE	PVI	POINT OF VERTICAL INTERSECTION
CMP	CORRUGATED METAL PIPE	R	RADIUS
CPSSP	CORRUGATED POLYETHYLENE STORM SEWER PIPE	REINF	REINFORCING, REINFORCED, REINFORMCMENT
CSBC	CRUSHED SURFACING BASE COURSE	R/W	RIGHT OF WAY
CSTC	CRUSHED SURFACING TOP COURSE	S	SOUTH
CULV	CULVERT	SCH	SCHEDULE
DIA	DIAMETER	SD	STORM DRAIN
DWG	DRAWING	SDMH	STORM DRAIN MANHOLE
E	EAST/EASTING	SHT	SHEET
EASE	EASEMENT	SIM	SIMILAR
EL, ELEV	ELEVATION	SS	SANITARY SEWER
EOP	EDGE OF PAVEMENT	SSMH	SANITARY SEWER MANHOLE
EVCE	END VERTICAL CURVE ELEVATION	STD	STANDARD
EVCS	END VERTICAL CURVE STATION	SWMM	CITY OF TACOMA SURFACE WATER MANAGEMENT MANUAL
EW	EACH WAY	T	TELEPHONE
EX/EXIST	EXISTING	TESC	TEMPORARY EROSION AND SEDIMENTATION CONTROL
FC	FACE OF CURB	TO	TOP OF
FH	FIRE HYDRANT	TOC	TOP OF CURB
FO	FIBER OPTIC	TOL	TOP OF LID
FT	FEET, FOOT	TOW	TOP OF WALL
G	GAS	TYP	TYPICAL
GALV	GALVANIZED	UNK	UNKNOWN
GV	GATE VALVE	VERT	VERTICAL
HORIZ	HORIZONTAL	W	WATER
HMA	HOT MIX ASPHALT	W/	WITH

SURVEYORS NOTES:

- THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY APRIL 2022.
- CONVENTIONAL AND GPS SURVEY EQUIPMENT WERE USED IN THE PERFORMANCE OF THIS SURVEY, ALL EQUIPMENT IS MAINTAINED IN CONFORMANCE WITH CURRENT STATE STATUTE.
- SURFACE FEATURES AND INVERT STRUCTURE ELEVATION SHOWN HEREON WERE FIELD LOCATED AND MEASURED BY PARAMETRIX FOR THIS SURVEY. UNDERGROUND UTILITY LINES ARE BASED UPON A COMBINATION OF ASBUILT PLANS, SURFACE FEATURE MEASUREMENTS AND ONSITE UNDERGROUND UTILITY MARKINGS PERFORMED BY OTHERS.
- THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH MAY REVEAL RESTRICTIONS OR EASEMENTS OF RECORD. ACCORDINGLY, NONE ARE SHOWN HEREON.
- THIS IS NOT A BOUNDARY SURVEY.

HORIZONTAL DATUM:

HORIZONTAL DATUM IS NAD83(2011), EPOCH 2010.00, OREGON COORDINATE REFERENCE SYSTEM PORTLAND ZONE, INT'L FEET BASED ON THE OREGON REAL-TIME NETWORK (ORGN) GNSS OBSERVATIONS AT CONTROL POINTS 108, 109, AND 110.

VERTICAL DATUM:

VERTICAL DATUM FOR THIS SURVEY IS (NAVD88) BASED UPON OREGON REAL-TIME NETWORK (ORGN) GNS OBSERVATIONS.

BENCHMARK:

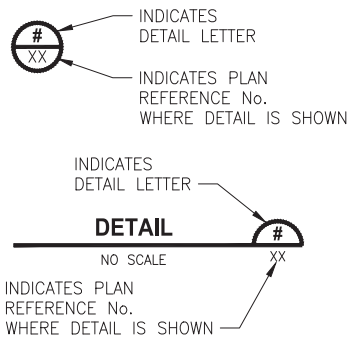
CONTROL POINT DATA SHOWN ON C1

GENERAL NOTES:

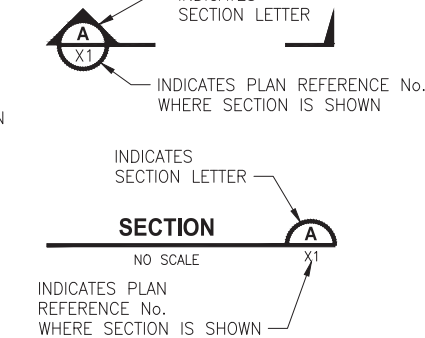
- ALL WORK AND MATERIALS SHALL CONFORM TO THE 2020 CITY OF PORTLAND STANDARD CONSTRUCTION SPECIFICATIONS AND/OR THE 2021 ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AS APPLICABLE.
- LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND SURVEY OF IDENTIFIABLE SURFACE FEATURES ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE OWNER PRIOR TO COMMENCEMENT OF THE AFFECTED CONSTRUCTION.
- PROTECT THE ENVIRONMENT. NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS, ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY.
- THE CONTRACTOR SHALL MEET THE CONDITIONS OF ALL PROJECT PERMITS AND LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- PROVIDE ADEQUATE FLAGGERS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES FOR THE PROTECTION OF THE PUBLIC, PROPERTY, AND WORK AT ALL TIMES.
- COORDINATE ALL ACTIVITIES WITH THE OWNER SO THAT INTERFERENCE WITH ONGOING SITE OPERATIONS IS MINIMIZED.
- CONTRACTOR TRAFFIC SHALL YIELD RIGHT OF WAY TO OPERATIONS AND CUSTOMER TRAFFIC.
- MAINTAIN ALL ROADS AND AREAS THAT ARE NOT PART OF THE PROJECT IN A USABLE STATE AT ALL TIMES.
- MAINTAIN INBOUND TRAFFIC THROUGH THE RADIATION DETECTION PYLONS AND ACROSS SCALES AT ALL TIMES. MAINTAIN A MINIMUM ONE LANE OUTBOUND TRAFFIC ACROSS SCALES AT ALL TIMES. COORDINATE TRAFFIC ROUTING WITH OWNER.

DETAIL AND SECTION DESIGNATIONS

DETAIL CALLOUT:



SECTION CUT:



ISSUED FOR PERMIT
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	DESIGNED
			I. SUTTON
			S. AZAHARI
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY.

FILE NAME: PS3312011_G02
JOB No.: 233-3312-011
DATE: JULY 2022



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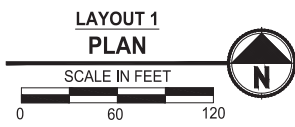
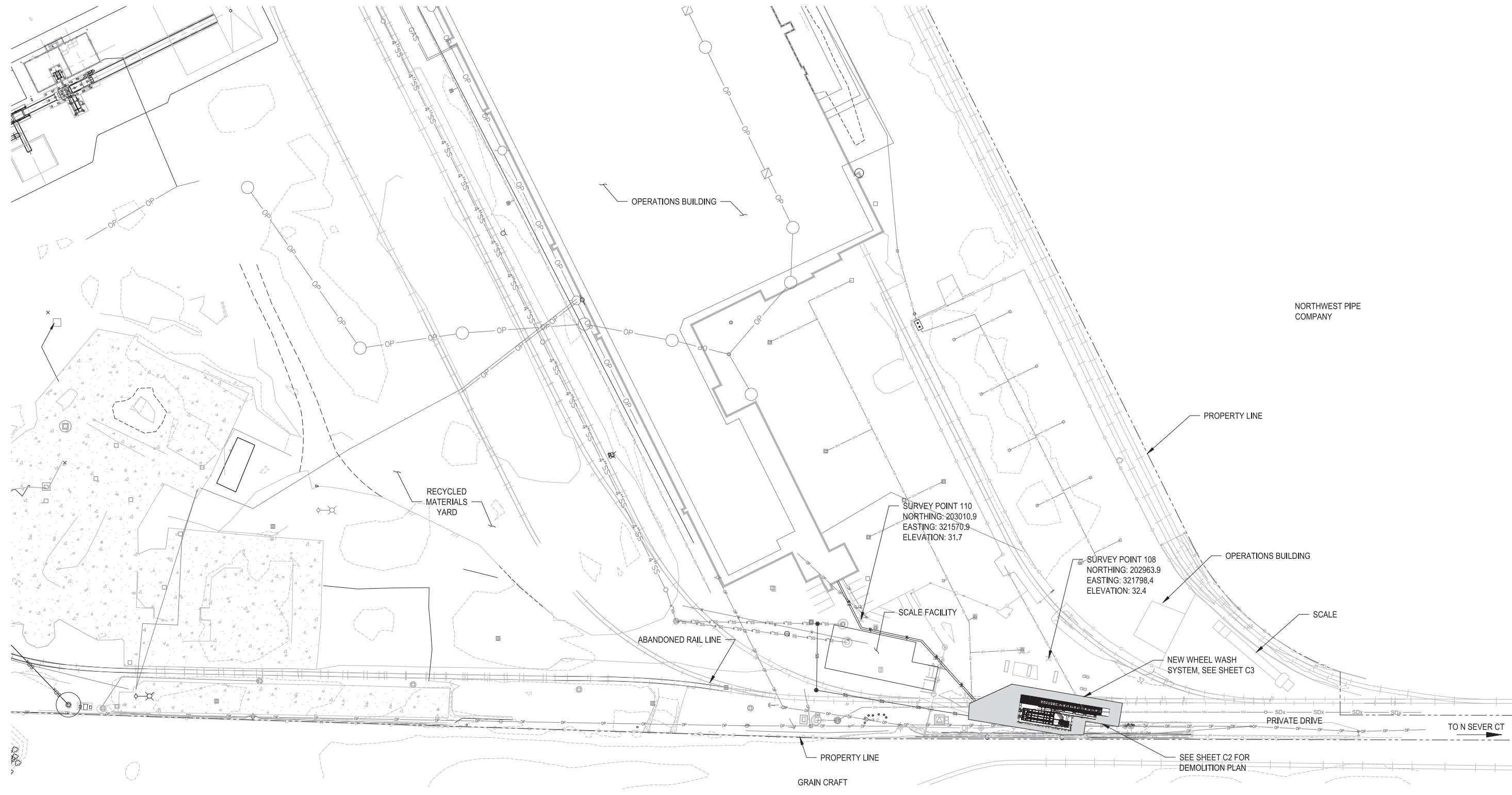
**SCHNITZER STEEL INDUSTRIES
WHEEL WASH SYSTEM INSTALLATION**
PORTLAND, OR

**LEGEND, NOTES, AND
ABBREVIATIONS**

DRAWING NO.
2 OF 10

G2

PATH: \\parametrix.com\pmx\PSO\Projects\Clients\3312-Schnitzer\233-3312-011 MainScaleWheelWash\95\Drawings\CADD\DWG PLOTTED BY: SteveAnd DATE: Wednesday, July 6, 2022 11:28:15 AM LAYOUT: C1



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REVISIONS	DATE	BY	DESIGNED
			S. AZAHARI
			J. CERALDE
			I. SUTTON
			B. BALL

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PS3312011_C1

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WHEEL WASH SYSTEM INSTALLATION**

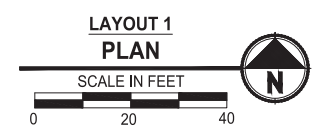
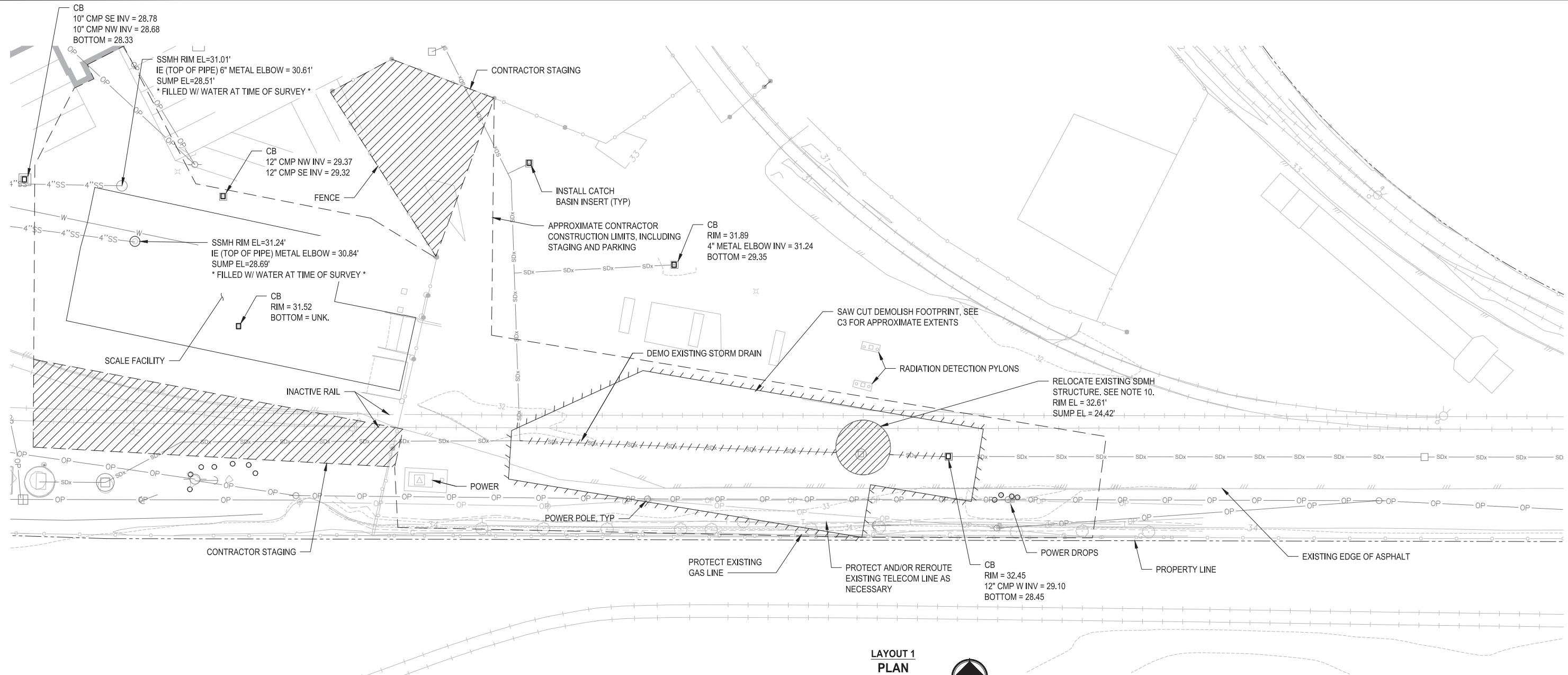
PORTLAND, OR

SITE PLAN

DRAWING NO.
3 OF 10

C1

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NOTES

- EXISTING FEATURES AND UTILITIES SHOWN ARE BASED ON AVAILABLE INFORMATION AND FIELD SURVEY. ALL FEATURES AND UTILITIES MAY NOT BE LOCATED OR ACCURATELY DEPICTED. CONTRACTOR SHALL CONFIRM AND IDENTIFY LOCATIONS OF FEATURES AND UTILITIES PRIOR TO CONSTRUCTION.
- PRESERVE AND PROTECT EXISTING SITE FEATURES AND UTILITIES, UNLESS NOTED OTHERWISE.
- IN CONSULTATION WITH THE OWNER, PROVIDE PHYSICAL SEPARATION OF THE WORK AREA FROM THE REMAINDER OF THE SITE AS NEEDED TO MAINTAIN WORK AREA SECURITY AND SAFETY.
- CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR WORKER SAFETY, AND DAMAGE TO STRUCTURES AND IMPROVEMENTS RESULTING FROM CONSTRUCTION OPERATIONS. ALL TRENCH EXCAVATION OPERATIONS SHALL MEET OR EXCEED ALL APPLICABLE SHORING LAWS FOR TRENCHES. ALL TRENCH SAFETY SYSTEMS SHALL MEET OSHA REQUIREMENTS.
- SAW CUT, REMOVE, AND DISPOSE OF PAVEMENT AND SURFACE FEATURES WITHIN THE DEMOLITION FOOTPRINT. DEMOLITION FOOTPRINT SHOWN IS APPROXIMATE AND MAY VARY BASED ON CONTRACTOR MEANS AND METHODS. EXISTING PAVEMENT THICKNESS MAY VARY BETWEEN 6 AND 12 INCHES.

NOTES (CONT.)

- EXTENSION OF WATER AND POWER TO THE WHEEL WASH ARE SHOWN ON C3.
- SEWER AND STORM DRAIN MODIFICATIONS ARE SHOWN ON C3.
- IF REQUIRED, COORDINATE REMOVAL OF EXISTING RAIL WITH THE OWNER.
- POTHOLE EXISTING UTILITIES AT PIPE CROSSINGS AND CONNECTION LOCATIONS. APPROXIMATE LOCATIONS SHOWN ON C3. CONFIRM FINAL DESIGN WITH OWNER BASED ON POTHOLE RESULTS.
- EMPTY EXISTING STRUCTURE OF WATER AND CONFIRM SIZE AND INVERTS. RELOCATE STRUCTURE AS SHOWN ON C3 AND RESTORE EXISTING PIPE CONNECTIONS. FINAL LOCATION TO BE DETERMINED IN THE FIELD, OUTSIDE OF THE WHEEL WASH FOOTPRINT. ADJUST TO FINAL GRADES SHOWN ON C3.

TESC NOTES

- THIS DRAWING REPRESENTS THE MINIMUM TESC REQUIREMENTS TO BE PROVIDED. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TESC NECESSARY TO MEET PERMIT REQUIREMENTS AND LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- TESC MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS IN THE CITY OF PORTLAND 2021 EROSION AND SEDIMENT CONTROL MANUAL.
- TESC SHALL BE INSTALLED PRIOR TO INITIATING OTHER WORK.
- TESC MEASURES SHALL BE MAINTAINED THROUGH THE DURATION OF THE WORK, AND SHALL NOT BE REMOVED UNTIL CONSTRUCTION IS COMPLETE AND ACCEPTED BY THE OWNER.
- CLEAN CATCH BASINS AND CONVEYANCE PIPING IMPACTED BY THE CONSTRUCTION UPON REMOVAL OF THE TESC MEASURES.
- CATCH BASIN INSERTS SHALL BE PROVIDED IN ACCORDANCE WITH CITY OF PORTLAND EROSION AND SEDIMENT CONTROL MANUAL SECTION 4.3.6 FIGURE 4.3-G.
- PERFORM SAW CUTTING IN ACCORDANCE WITH CITY OF PORTLAND EROSION AND SEDIMENT CONTROL MANUAL SECTION 5.3.6.

PRELIMINARY CONSTRUCTION SEQUENCE

- HOLD PRE-CONSTRUCTION MEETING
- MOBILIZATION AND DELINEATION AND SEPARATION OF THE WORK AREA
- INSTALLATION OF TESC, UTILITY LOCATES AND SURVEY
- POTHOLE EXISTING UTILITY TIE-IN LOCATIONS FOR DESIGN CONFIRMATION
- DEMOLITION OF THE EXISTING ASPHALT FOOTPRINT AND UTILITIES
- STORM DRAIN RECONFIGURATION
- UTILITY EXTENSIONS INCLUDING WATER, SEWER, AND POWER
- SETTLING AND RECYCLING TANKS FOUNDATION INSTALLATION, TANK INSTALLATION AND BACKFILL
- WHEEL WASH FOUNDATION INSTALLATION
- WHEEL WASH INSTALLATION
- BACKFILL AND PAVING
- REMOVE TESC UPON FINAL SITE STABILIZATION AND OWNER APPROVAL

**ISSUED FOR PERMIT
NOT FOR CONSTRUCTION**

REVISIONS	DATE	BY	DESIGNED
			S. AZAHARI
			J. CERALDE
			I. SUTTON
			B. BALL

**ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY**

FILE NAME: PS3312011_C2
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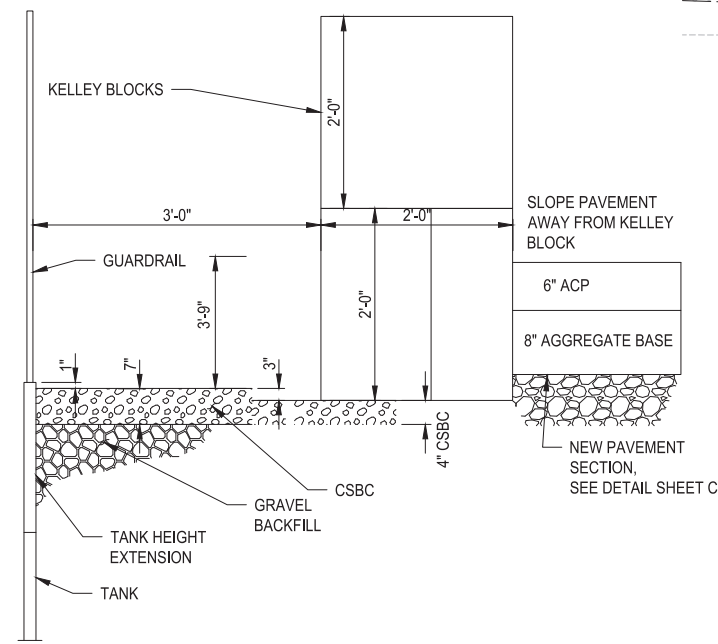
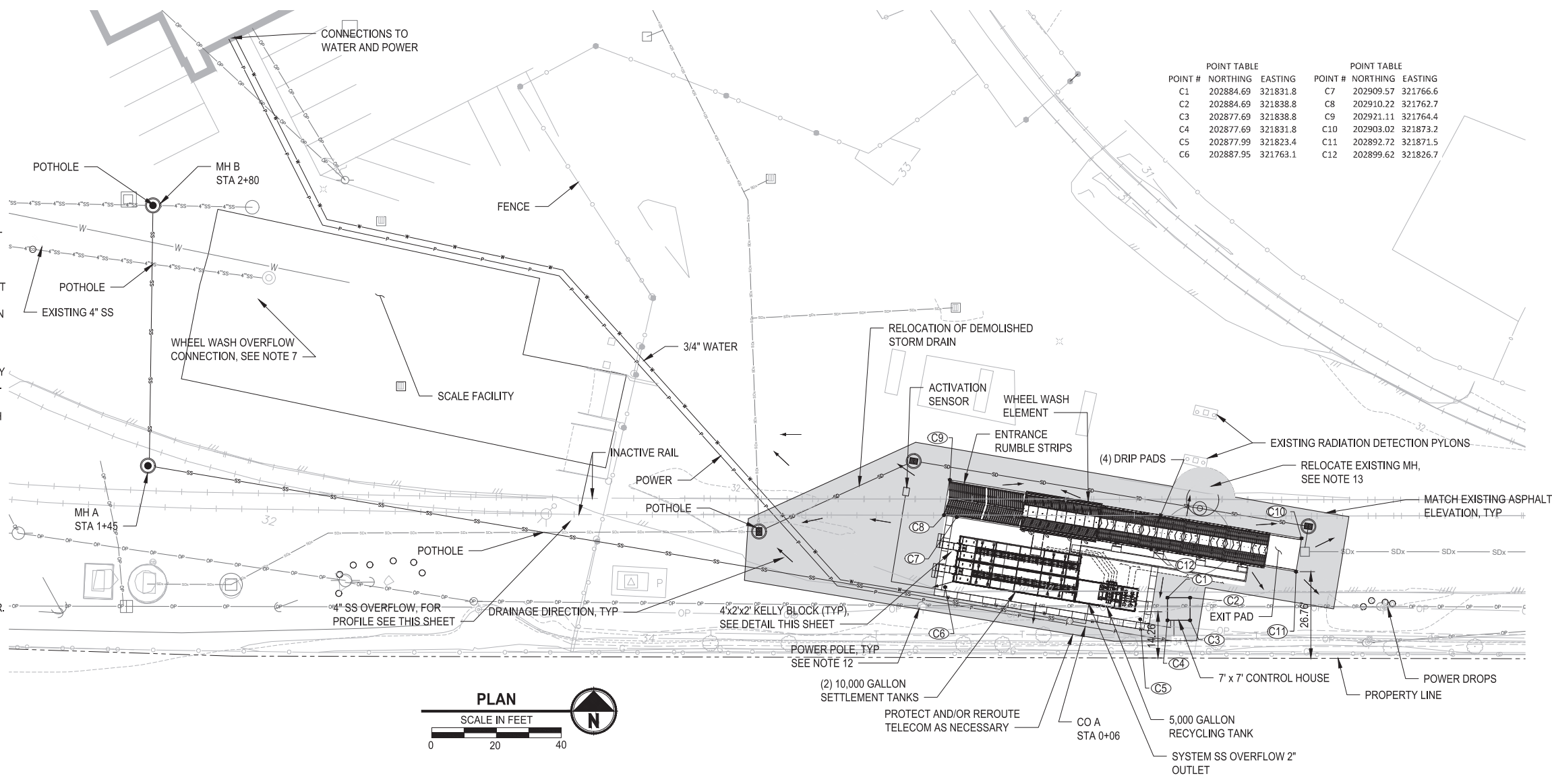
TESC AND DEMOLITION PLAN

DRAWING NO.
4 OF 10
C2

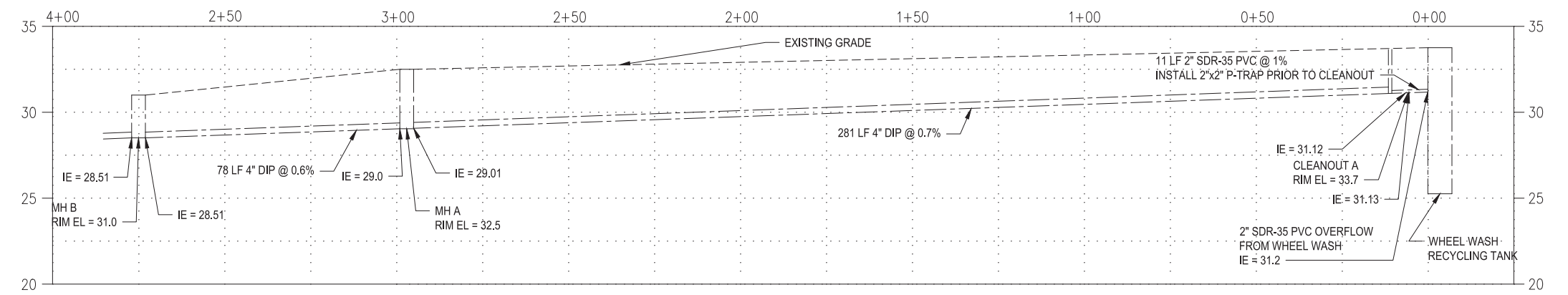
NOTES

1. WHEEL WASH EQUIPMENT SHALL BE MANUFACTURED BY MOBY DICK WHEEL WASHING SYSTEMS AND AS PROVIDED BY THE OWNER.
2. INSTALL WHEEL WASH SYSTEM IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. PLAN SHOWS SITE UTILITY CONNECTIONS TO BE PROVIDED IN FIELD THROUGH CONSULTATION WITH OWNER. WHEEL WASH SYSTEM UTILITIES NOT SHOWN FOR CLARITY.
3. MANUFACTURER'S REPRESENTATIVE WILL BE AVAILABLE TO CONSULT DURING INSTALLATION.
4. CONTROL HOUSE WILL BE OWNER PROVIDED. COORDINATE INSTALLATION OF WHEEL WASH CONTROLS WITH OWNER PROVIDED CONTROL HOUSE. LOCATION SHOWN IS APPROXIMATE.
5. PROVIDE 3/4 INCH INTERNAL THREAD WATER SUPPLY. CONNECTION LOCATION SHALL BE ON THE UPPER PORTION OF THE SOUTHWEST WALL OF THE RECYCLING TANK, IN ACCORDANCE WITH WHEEL WASH MANUFACTURER'S DRAWINGS.
6. PROVIDE 220 AMP, 480 V, 3 PHASE SERVICE TO THE CONTROL HOUSE. CONTRACTOR SHALL COORDINATE WITH OWNER FOR THE CONNECTION TO THE EXISTING POWER SOURCE AS SHOWN ON THE PLANS.
7. CONFIRM OVERFLOW LOCATION AND SIZE. PROVIDE 4-INCH PVC OVERFLOW PIPE AND ROUTE TO PROPOSED SANITARY SEWER AS SHOWN ON PLANS. CONFIRM FINAL ALIGNMENT AND CONNECTION WITH OWNER BASED ON CONTRACTOR POT HOLE RESULTS. SURVEY SS MH INVERTS AND COORDINATE OVERFLOW GRADIENT WITH OWNER. RESTORE ASPHALT IN ACCORDANCE WITH CITY OF PORTLAND DETAIL P-516 AND SPECIFICATION SECTION 00748.
8. EXISTING WATER PIPE CONNECTION TO BE MADE AS SHOWN ON PLANS. CONTRACTOR SHALL DETERMINE THE EXISTING WATER PIPE DIAMETER AND MAKE THE PROPER CONNECTION TO THE MANUFACTURER'S SUPPLIED EQUIPMENT. COORDINATE TEMPORARY SERVICE DISRUPTION AND RELOCATION OPTIONS WITH OWNER PRIOR TO CONSTRUCTION.
9. INSTALL WHEEL WASH SENSOR AND ANCILLARY EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S LAYOUT AND INSTRUCTIONS. RESTORE ASPHALT IN ACCORDANCE WITH CITY OF PORTLAND DETAIL P-516 AND SPECIFICATION SECTION 00748.
10. INSTALL STRUCTURAL WORK BASED ON STRUCTURAL ELEVATION 0'-0" EQUAL TO ACTUAL ELEV 32.61'. SLOPE NEW ASPHALT TO DRAIN AWAY FROM THE WHEEL WASH SYSTEM. PROVIDE SMOOTH TRANSITIONS AND UNIFORM SLOPES. INSTALL NEW ASPHALT AT THE SYSTEM ENTRANCE AND EXIST, EXTENDING AS REQUIRED TO FACILITATE A MAXIMUM 5% SLOPE TO MATCH EXISTING GRADES.
11. SANITARY SEWER SHALL BE ENCASED IN CONCRETE WHEN INSTALLED WITHIN 10' OF WATER PIPE LINES IN ACCORDANCE WITH CITY OF PORTLAND SPECIFICATION SECTION 01140 AND STANDARD DETAIL P-103. SEE SHEET C-4 FOR STANDARD DETAIL.
12. PROTECT ALL EXISTING IMPROVEMENTS NOT DIRECTLY IMPACTED BY THIS PROJECT. PROVIDE TEMPORARY STRUCTURAL SUPPORT AS REQUIRED TO FACILITATE CONSTRUCTION. COORDINATE WITH UTILITY SERVICE PROVIDERS WHEN NECESSARY.
13. FINAL MH LOCATION TO BE DETERMINED IN THE FILED IN CONSULTATION WITH THE OWNER. ADJUST ADJACENT ALIGNMENTS AND CBs AS REQUIRED.

POINT TABLE			POINT TABLE		
POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
C1	202884.69	321831.8	C7	202909.57	321766.6
C2	202884.69	321838.8	C8	202910.22	321762.7
C3	202877.69	321838.8	C9	202921.11	321764.4
C4	202877.69	321831.8	C10	202903.02	321873.2
C5	202877.99	321823.4	C11	202892.72	321871.5
C6	202887.95	321763.1	C12	202899.62	321826.7



**KELLY BLOCK INSTALLATION
DETAIL**
NOT TO SCALE



**OVERFLOW DRAIN SANITARY SEWER
PROFILE**
HORT: 1" = 20'
VERT: 1" = 4'

LAYOUT: C3
 PATH: \\parametrix.com\pmx\PSO\Projects\Clients\3312-Schnitzer\3312-011 MainScaleRdWheelWash\CADD\DWG
 PLOTTED BY: SteveAnd DATE: Wednesday, July 6, 2022 12:10:11 PM

REVISIONS	DATE	BY	DESIGNED
			I. SUTTON
			S. AZAHARI
			CHECKED
			APPROVED

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IF NOT, SCALE ACCORDINGLY**
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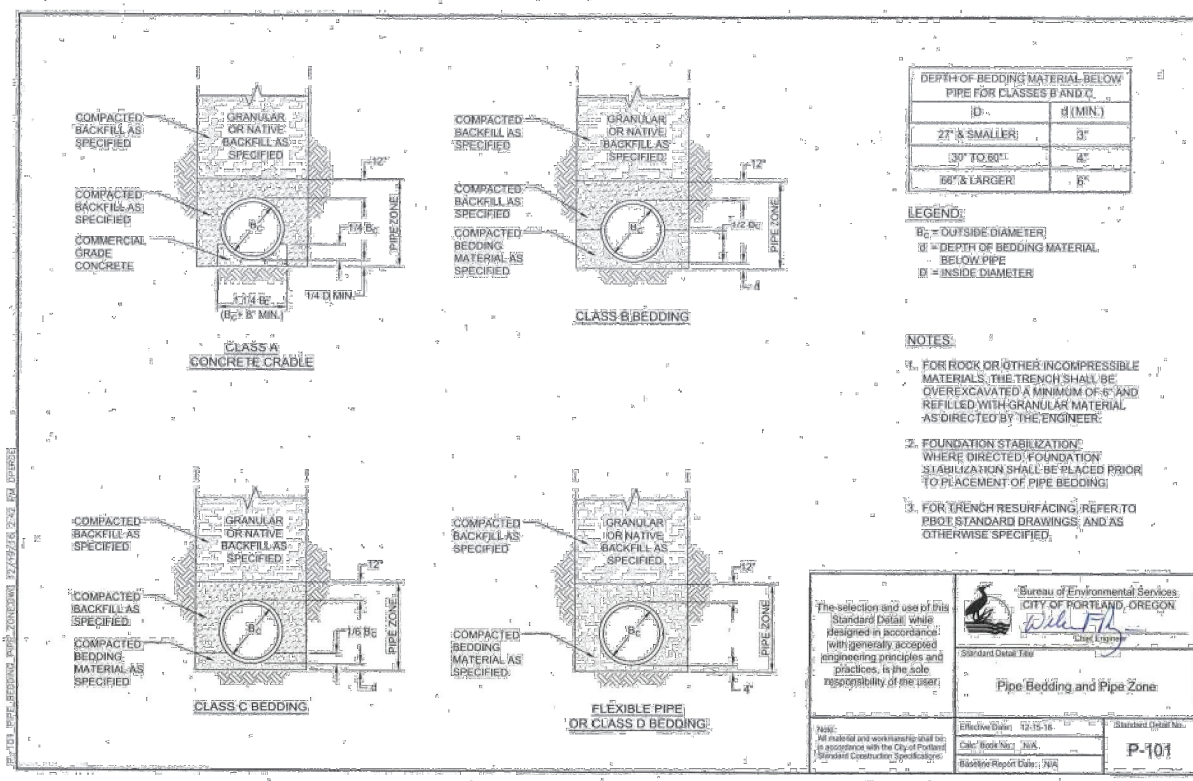
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WHEEL WASH SYSTEM INSTALLATION**
 PORTLAND, OR

WHEEL WASH SYSTEM PLAN
C3

DRAWING NO.
 5 OF 10

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PATH: \\parametrix.com\psd\Projects\Clients\3312-Schnitzer\3312-Schnitzer\3312-011 MainSewerPipe\Wash\985\985\985\CADD\DWG PLOTTED BY: SteveAnd DATE: Wednesday, July 6, 2022 11:37:37 AM LAYOUT: 02

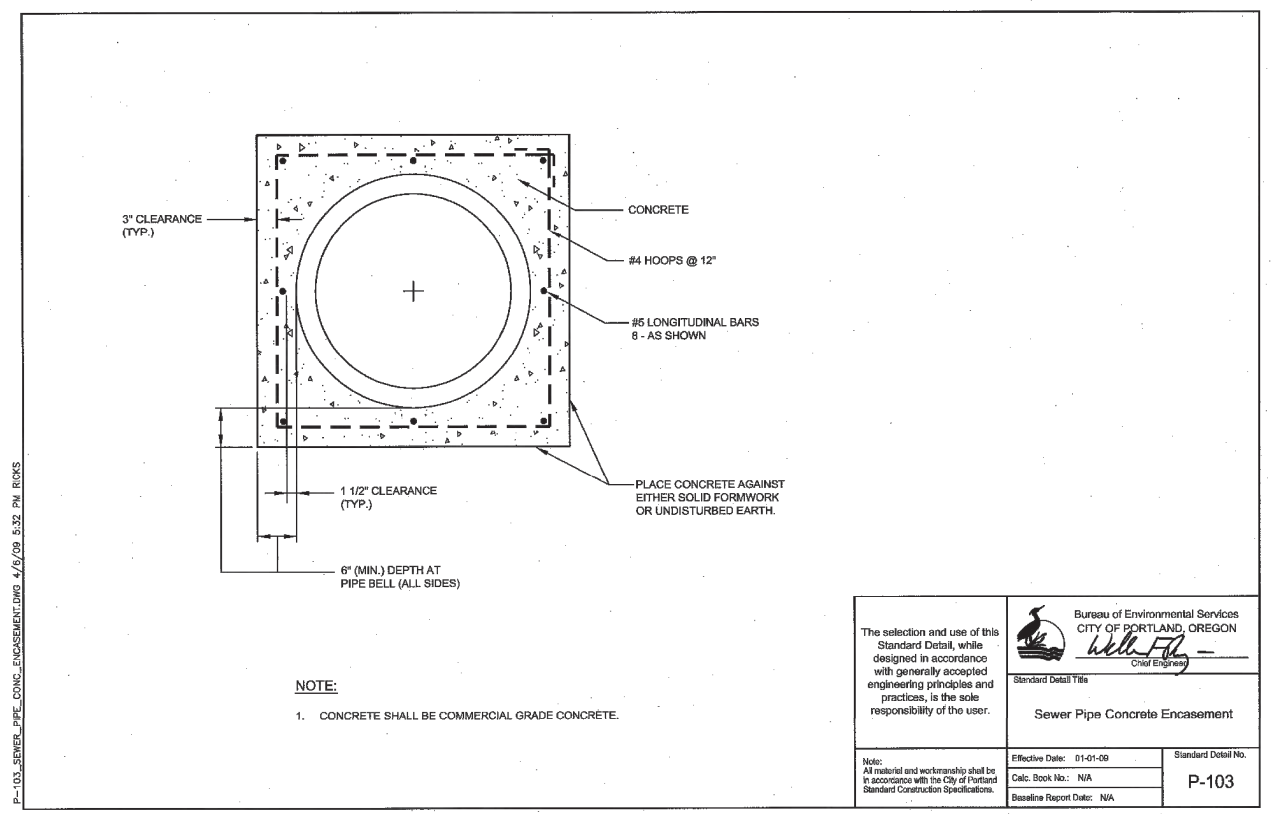


The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan, Chief Engineer

Standard Drawing Title: Pipe Bedding and Pipe Zone
Effective Date: 12-15-16
Calc. Book No.: N/A
Baseline Report Date: 7/8/20

Standard Detail No.: P-101

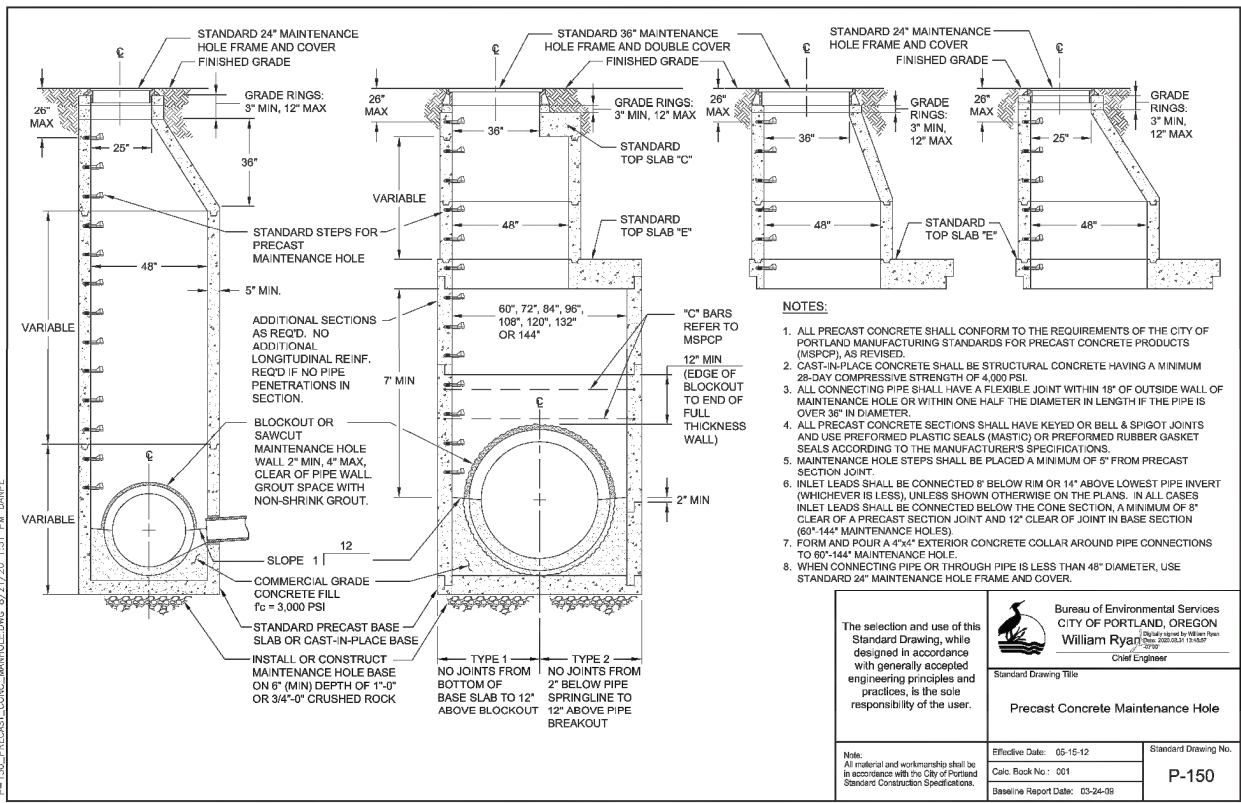


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Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan, Chief Engineer

Standard Detail Title: Sewer Pipe Concrete Encasement
Effective Date: 01-01-09
Calc. Book No.: N/A
Baseline Report Date: N/A

Standard Detail No.: P-103

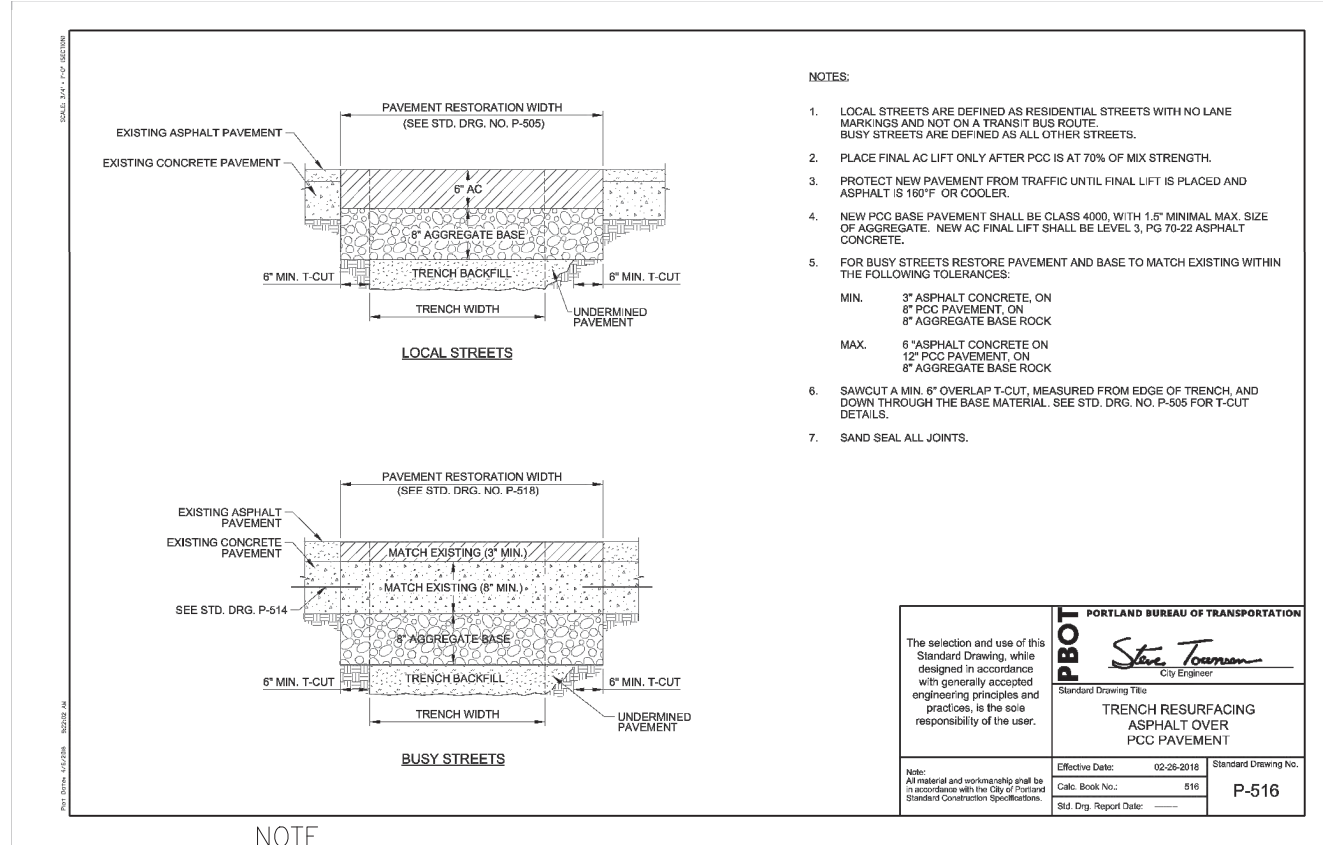


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Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan, Chief Engineer

Standard Drawing Title: Precast Concrete Maintenance Hole
Effective Date: 05-15-12
Calc. Book No.: 001
Baseline Report Date: 03-24-08

Standard Drawing No.: P-150



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PORTLAND BUREAU OF TRANSPORTATION
Steve Toerman, City Engineer

Standard Drawing Title: TRENCH RESURFACING ASPHALT OVER PCC PAVEMENT
Effective Date: 02-28-2016
Calc. Book No.: 516
Std. Dwg. Report Date:

Standard Drawing No.: P-516

REVISIONS	DATE	BY	DESIGNED
			S. AZAHARI
			J. CERALDE
			I. SUTTON
			B. BALL

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FILE NAME: PS3312011_C4
JOB No.: 233-3312-011
DATE: JULY 2022



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PROJECT NAME:
**SCHNITZER STEEL INDUSTRIES
WHEEL WASH SYSTEM INSTALLATION**
PORTLAND, OR

NOTES AND CIVIL DETAILS

DRAWING NO.
6 OF 10

C4

**ISSUED FOR PERMIT
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DESIGN CRITERIA

APPLICABLE BUILDING CODES
 OREGON STRUCTURAL SPECIALITY CODE, OSSC 2019 EDITION
 INTERNATIONAL BUILDING CODE, IBC 2018 EDITION

STRUCTURAL DESIGN LOADS

FOR ALL LOADS, IMPORTANCE FACTORS = 1.0.
 FOR ASCE 7-10 OCCUPANCY CATEGORY II.

LIVE LOADS
 VEHICLE LOADINGAASHTO HS-20
 LOADING ON TANKS, FLUID WEIGHT.....62.4 PCF
 EQUIPMENT LOADING PER MANUFACTURER

SOIL LOADS
 SOIL LATERAL PRESSURE EQUIVALENT FLUID OF 55 PCF FOR NON-YIELDING WALLS.
 LATERAL PRESSURE OF 75 PSF FOR MOBILE EQUIPMENT LOADS
 SEISMIC LATERAL PRESSURE OF 7H PSF

SEISMIC LOADS
 SITE CLASS = F
 S_s = 0.891, S₁ = 0.410
 F_a = 1.300, F_v = 2.38
 S_{ps} = 0.772, S_{p1} = 0.651
 SEISMIC DESIGN CATEGORY = D

FOUNDATIONS

BASED ON:
 "REVISED REPORT OF GEOTECHNICAL ENGINEERING SERVICES" FOR SCHNITZER STEEL 3DS
 PROJECT, PORTLAND, OREGON BY GEODESIGN INC. MARCH 15, 2021.

CONTINUOUS INSPECTION OF FILL PLACED AND COMPACTED UNDER BUILDING SLAB AND
 FOOTINGS REQUIRED BY AN APPROVED, INDEPENDENT TESTING AGENCY. FILL SHALL
 CONFORM TO GEOTECHNICAL RECOMMENDATIONS AND SHALL BE COMPACTED TO 95% OF
 THE MAXIMUM DRY DENSITY. FILL SHALL BE PLACED IN MAX. 8" LIFTS. DENSITY TESTS
 SHALL BE TAKEN AT 10-FOOT INTERVALS AROUND THE PERIMETER OF THE STRUCTURE
 AND AT 10 EVENLY SPACED LOCATIONS UNDER THE SLAB.

STRUCTURAL NOTES:

GENERAL REQUIREMENTS

REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF
 RECESSES, DUCT OPENINGS, PIPING, CONDUITS, EQUIPMENT LOCATION AND ANCHORAGES, ETC.,
 NOT SHOWN.

CONCRETE

ALL DETAILING, FABRICATION AND INSTALLATION OF REINFORCING BARS SHALL BE IN ACCORDANCE
 WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED
 CONCRETE STRUCTURES ACI 315, LATEST EDITION.

CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR
 STRUCTURAL CONCRETE, LATEST EDITION.

DESIGN STRENGTH
 CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED:
 ALL CONCRETE f'c = 4000 PSI AT 28 DAYS AND AIR ENTRAINMENT = 6%

REINFORCING
 REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60.

REINFORCING STEEL FOR WELDED APPLICATIONS SHALL BE IN ACCORDANCE
 WITH ASTM A706, GRADE 60.

CONCRETE COVER
 CONCRETE COVER FOR REINFORCING BARS, EXCEPT AS NOTED:
 FOOTINGS AND MATS (CAST AGAINST SOIL).....3"
 CONCRETE EXPOSED TO SOIL, WEATHER, OR CHEMICALS.....2"

PROVIDE 3/4" CHAMFER AT ALL EXPOSED EDGES AND OUTSIDE CORNERS.

ACCESSORY BARS
 RIGIDLY SUPPORT BARS ON APPROVED ACCESSORIES. PROVIDE #4 RAISER BARS AT 36" ON
 CENTERS MAXIMUM TO SUPPORT TOP REINFORCING STEEL IN SLABS/MATS.

DOWELS AND CORNER BARS
 ALL HORIZONTAL BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH PILASTERS.
 PROVIDE DOWELS AND CORNER BARS FOR ALL COLUMN AND WALL REINFORCEMENT, AT LEAST
 THE SAME SIZE AND SPACING AS BARS WITH WHICH THEY ARE LAPPED.

JOINTS
 ROUGHENED SURFACES AT JOINTS SHALL HAVE A SURFACE AMPLITUDE OF 1/4" MIN.

BAR SPLICES
 REINFORCING STEEL LAP SPLICES SHALL BE PER TABLE SHOWN BELOW. THE LENGTH OF LAP
 SPLICE OF BARS OF DIFFERENT DIAMETERS SHALL BE BASED ON THE SMALLER DIAMETER. BAR
 SPLICES MAY ALSO BE MADE BY WELDING IN ACCORDANCE WITH AWS D1.4 WELDING CODE.
 WHERE REINFORCING BARS CANNOT BE DEVELOPED DUE TO TO THE LIMITED EXTENT OF THE
 CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD
 HOOKS.

HOOKS ARE ACI 318 STANDARD UNLESS NOTED.

CAST IN PLACE ANCHOR BOLTS
 ANCHOR BOLTS SHALL CONFORM TO ASTM A307 OR A36. (GALVANIZED UNLESS NOTED).
 EMBEDDED END TO HAVE SQUARE OR HEX HEAD OR 3" DIAMETER HOOK.
 MINIMUM EMBEDMENT SHALL BE 8 BOLT DIAMETERS.

DRILLED-IN EXPANSION BOLTS
 EXPANSION BOLTS SHALL BE "KWIK BOLT TZ PER ICC ESR-1917" BY HILTI CORP., OR
 APPROVED EQUAL. CURRENT ICC-ES REPORT IS REQUIRED. MINIMUM SPACING SHALL BE 12
 BOLT DIAMETERS AND MINIMUM EDGE DISTANCE 6 BOLT DIAMETERS UNLESS NOTED OTHERWISE.
 MINIMUM EMBEDMENT IN STRUCTURAL CONCRETE SHALL BE 7 BOLT DIAMETERS.

ADHESIVE ANCHORING SYSTEM
 REINFORCING BARS AND RODS ANCHORED INTO EXISTING CONCRETE SHALL BE IN DRILLED
 HOLE WITH HILTI HIT-RE 500 V3, OR APPROVED EQUAL. CURRENT ICC-ES REPORT IS
 REQUIRED. MINIMUM EMBEDMENT IN STRUCTURAL CONCRETE SHALL BE 8 DIAMETERS. MINIMUM
 EDGE DISTANCE 6 DIAMETERS.

ALL POST-INSTALLED ANCHORS MUST BE APPROVED FOR USE IN CRACKED CONCRETE IN SEISMIC
 DESIGN CATEGORY D. SEE SPECIFIC ICC EVALUATION REPORT FOR LIMITATIONS OF USE AND
 INSTALLATION REQUIREMENTS INCLUDING TORQUE.

STRUCTURAL & MISCELLANEOUS STEEL

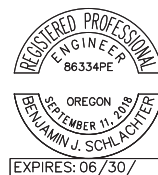
MATERIAL:
 STRUCTURAL SHAPES SHALL CONFORM TO ASTM A992 (A572/50).
 PLATES SHALL CONFORM TO ASTM A36.
 TUBES (HSS) SHALL CONFORM TO ASTM A500, GRADE B OR C.
 PIPES SHALL CONFORM TO ASTM A53, GRADE B.
 UNLESS NOTED OTHERWISE OR PAINTED, ALL STRUCTURAL STEEL SHALL BE GALVANIZED
 PER ASTM 123. ALL HARDWARE SHALL BE GALVANIZED PER ASTM 153.

WELDING:
 ALL WELDING SHALL CONFORM TO AWS D1.1 WELDING CODE. MINIMUM SIZE WELDS 3/16"
 CONTINUOUS FILLET.

STEEL REINFORCING LAP SCHEDULE

BAR SIZE	CONCRETE f'c = 4,000 PSI
#3	19"
#4	25"
#5	31"
#6	37"
#7	48"
#8	55"
#9	62"
#10	69"

MINIMUM LAP SPLICES UNLESS
 OTHERWISE DETAILED ON DRAWINGS



**ONE INCH AT FULL SCALE.
 IF NOT, SCALE ACCORDINGLY**

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PROJECT NAME
**SCHNITZER STEEL INDUSTRIES
 MAIN SCALE ROAD WHEEL WASH SYSTEM**
 PORTLAND, OREGON

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STRUCTURAL NOTES

S0

DRAWING NO.
 7 OF 10

LAYOUT: S0 PATH: U:\PSO\Projects\Clients\3312-Schnitzer\3312-011_MainScaleWheelWash\995\ca\CADD\DWG PLOTTED BY: McDonSte DATE: Wednesday, July 6, 2022 12:58:59 PM

REVISIONS	DATE	BY	DESIGNED
			B. SCHLACHTER
			DRAWN S. McDONALD
			CHECKED D. McINTIER
			APPROVED I. SUTTON

LAYOUT: SI PATH: U:\PSO\Projects\Clients\3312-Schnitzer\3312-011_MainScaleWheelWash\995sca\CADD\DWG PLOTTED BY: McDonSte DATE: Wednesday, July 6, 2022 12:59:00 PM

SPECIAL INSPECTION SCHEDULE			
ITEM	CI	PI	REMARKS/REFERENCES
GENERAL:			
PREFABRICATED ITEMS		X	
CONCRETE:			
REINFORCEMENT MATERIAL AND PLACEMENT		X	ACI 318 20, 25.2, 25.3, 16.6.1-26.6.3
WELDING - REINFORCING		X	AWS D1.4, ACI 318 26.6.4
ANCHORS CAST IN CONCRETE		X	ACI 318 17.8.2
USE OF REQUIRED MIX DESIGN		X	ACI 318 19, 26.4.3, 26.4.4
CONCRETE SLUMP, AIR CONTENT, TEMPERATURE & TEST SPECIMENS	X		WHILE MAKING SPECIMENS FOR STRENGTH TESTS, ASTM C172, ASTM C31, ACI 318 26.5, 26.12
CONCRETE PLACEMENT	X		ACI 318 26.5
CONCRETE CURING		X	ACI 318 26.5.3-26.5.5
POST-INSTALLED ANCHORS			
ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED LOADS	X		ACI 318 17.8.2.4
MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE		X	ACI 318 17.8.2
VERIFY ON-SITE CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X	ACI 318 26.11.2
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED		X	ACI 318 26.11.1.2 (b)
SOILS:			
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X	BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL		X	BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY		X	BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY

SPECIAL INSPECTION SCHEDULE			
ITEM	CI	PI	REMARKS/REFERENCES
STEEL:			
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS AND SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		X	
INSPECTION OF HIGH-STRENGTH BOLTING:			
SNUG-TIGHT JOINTS		X	
PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OFF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.		X	AISC 360, SECTION M2.5
PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OFF-NUT WITHOUT MATCHMARKING, OR CALIBRATED WRENCH METHODS OF INSTALLATION	X		
MATERIAL VERIFICATION OF STRUCTURAL STEEL:			
FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360		X	AISC 360 SECTION N2.1
FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X	APPLICABLE ASTM MATERIAL STANDARDS
MANUFACTURER'S CERTIFIED TEST REPORTS		X	-
MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS		X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		X	-
INSPECTION OF WELDING:			
STRUCTURAL STEEL AND COLD-FORMED STEEL DECK			
SINGLE-PASS FILLET WELDS < 5/16"		X	AWS D1.1
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:			
DETAILS SUCH AS BRACING AND STIFFENING		X	
MEMBER LOCATION		X	
APPLICATION OF JOINT DETAILS AT EACH CONNECTION		X	

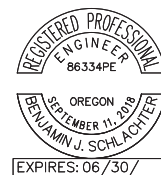
INSPECTION SCHEDULE NOTES

- ITEMS MARKED WITH AN "X" REQUIRE INSPECTION BY A SPECIAL INSPECTOR APPROVED BY THE BUILDING OFFICIAL.
- CI = CONTINUOUS INSPECTION DURING PROGRESS OF WORK BY SPECIAL INSPECTOR.
- PI = PERIODIC INSPECTION BY SPECIAL INSPECTOR AS REQUIRED TO CONFIRM CONFORMANCE OF WORK.
- TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER, BUILDING OFFICIAL AND CONTRACTOR.
- OWNER WILL CONTRACT FOR SPECIAL INSPECTION SERVICES.

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REVISIONS	DATE	BY	DESIGNED
			B. SCHLACHTER
			S. McDONALD
			D. McINTIER
			I. SUTTON

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PROJECT NAME
**SCHNITZER STEEL INDUSTRIES
 MAIN SCALE ROAD WHEEL WASH SYSTEM**
 PORTLAND, OREGON

**SPECIAL INSPECTION
 SCHEDULE**

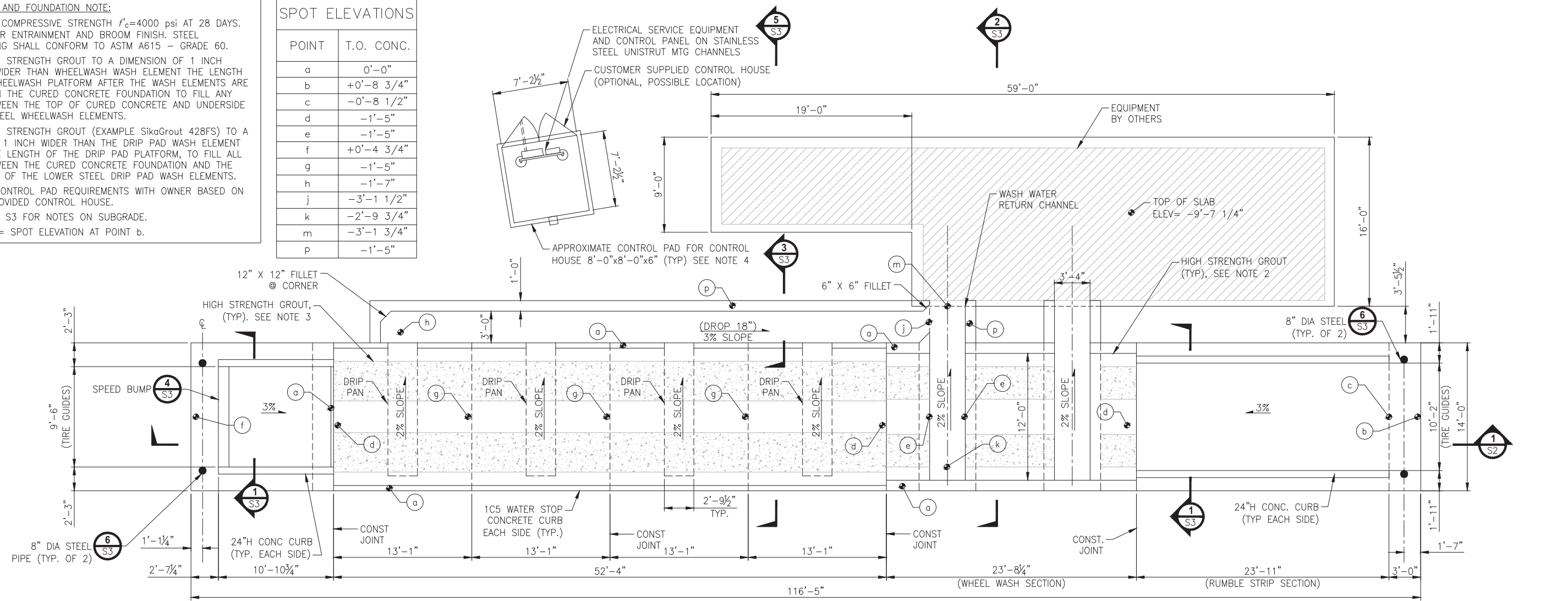
DRAWING NO.
 8 OF 10
S1

CONCRETE SLAB AND FOUNDATION NOTE:

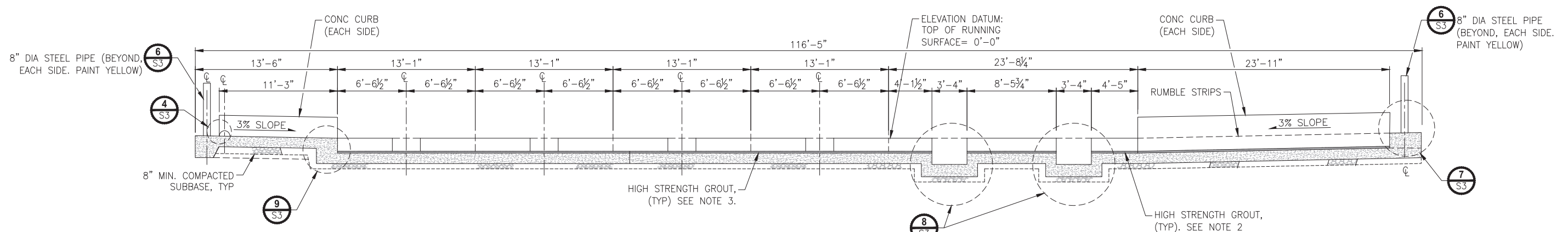
1. CONCRETE COMPRESSIVE STRENGTH $f'_c=4000$ psi AT 28 DAYS. PROVIDE AIR ENTRAINMENT AND BROOM FINISH. STEEL REINFORCING SHALL CONFORM TO ASTM A615 - GRADE 60.
2. POUR HIGH STRENGTH GROUT TO A DIMENSION OF 1 INCH OVERLAP WIDER THAN WHEELWASH WASH ELEMENT THE LENGTH OF THE WHEELWASH PLATFORM AFTER THE WASH ELEMENTS ARE PLACED ON THE CURED CONCRETE FOUNDATION TO FILL ANY GAPS BETWEEN THE TOP OF CURED CONCRETE AND UNDERSIDE OF THE STEEL WHEELWASH ELEMENTS.
3. POUR HIGH STRENGTH GROUT (EXAMPLE SikaGrout 428FS) TO A DIMENSION 1 INCH WIDER THAN THE DRIP PAD WASH ELEMENT WIDTH, THE LENGTH OF THE DRIP PAD PLATFORM, TO FILL ALL GAPS BETWEEN THE CURED CONCRETE FOUNDATION AND THE UNDERSIDE OF THE LOWER STEEL DRIP PAD WASH ELEMENTS.
4. CONFIRM CONTROL PAD REQUIREMENTS WITH OWNER BASED ON OWNER PROVIDED CONTROL HOUSE.
5. SEE SHEET S3 FOR NOTES ON SUBGRADE.
6. EL 32.07 = SPOT ELEVATION AT POINT b.

SPOT ELEVATIONS

POINT	T.O. CONC.
a	0'-0"
b	+0'-8 3/4"
c	-0'-8 1/2"
d	-1'-5"
e	-1'-5"
f	+0'-4 3/4"
g	-1'-5"
h	-1'-7"
j	-3'-1 1/2"
k	-2'-9 3/4"
m	-3'-1 3/4"
p	-1'-5"



PLAN
SCALE: NTS



WHEEL WASH STATION SECTION
SCALE: 1" = 5'-0"



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PROJECT NAME
**SCHNITZER STEEL INDUSTRIES
MAIN SCALE ROAD WHEEL WASH SYSTEM**
PORTLAND, OREGON

STRUCTURAL PLAN
DRAWING NO.
9 OF 10
S2

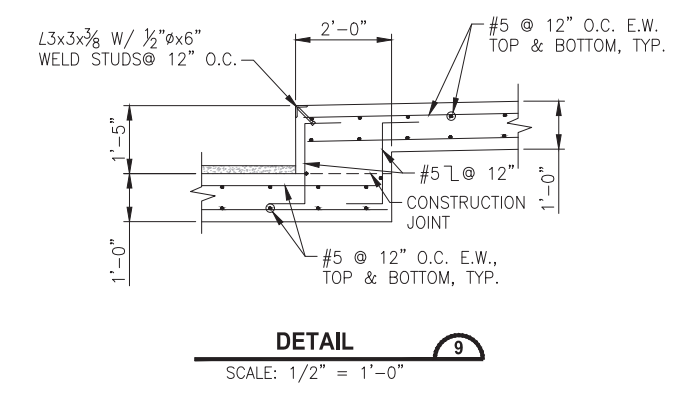
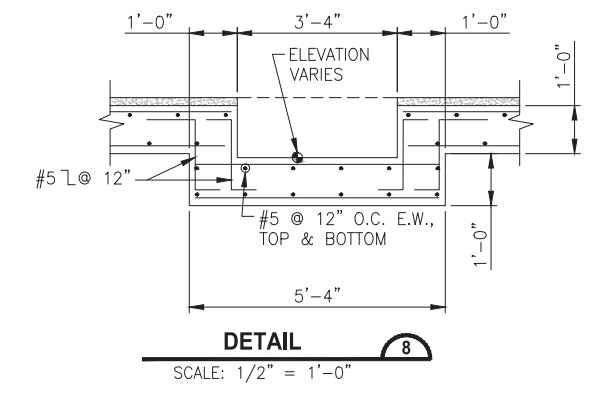
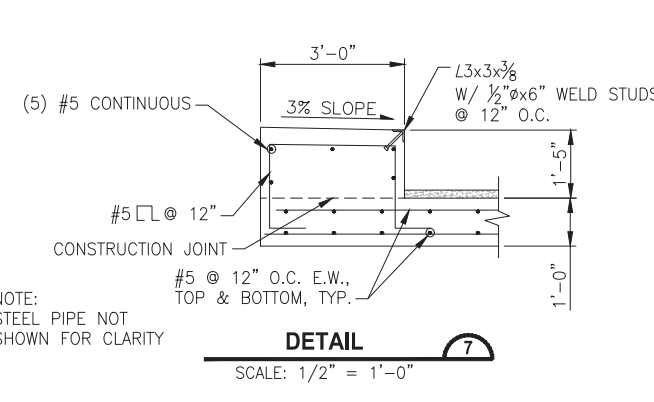
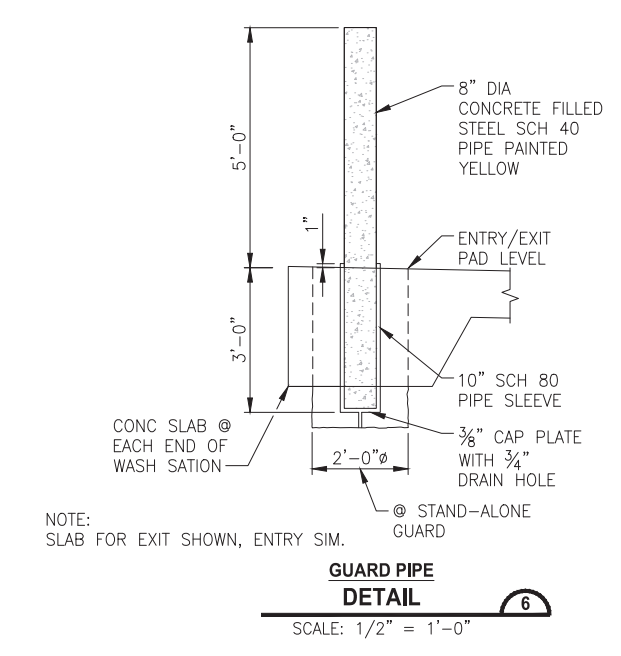
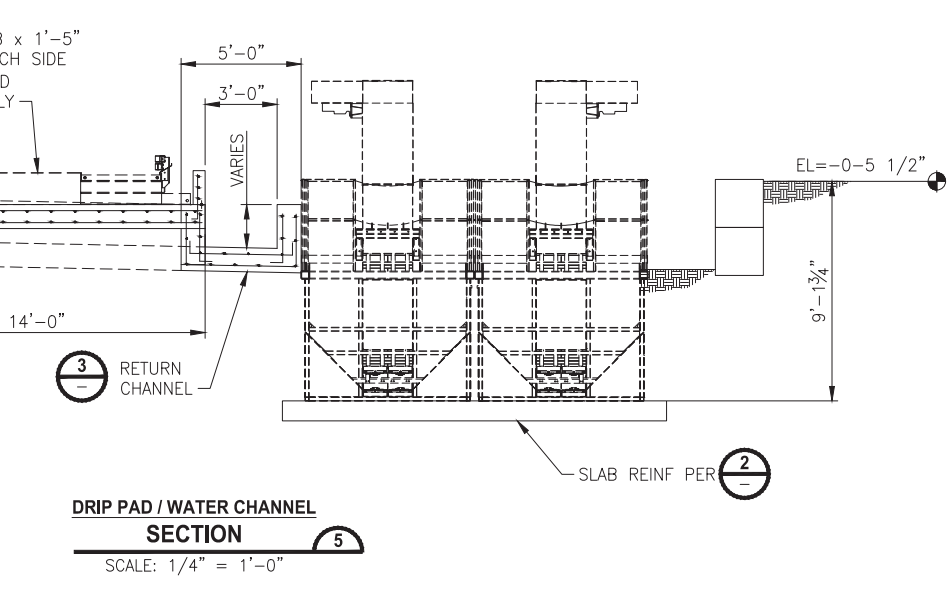
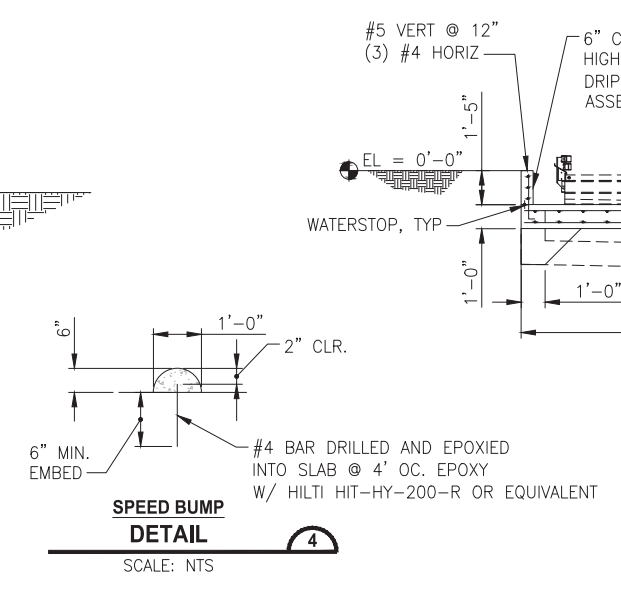
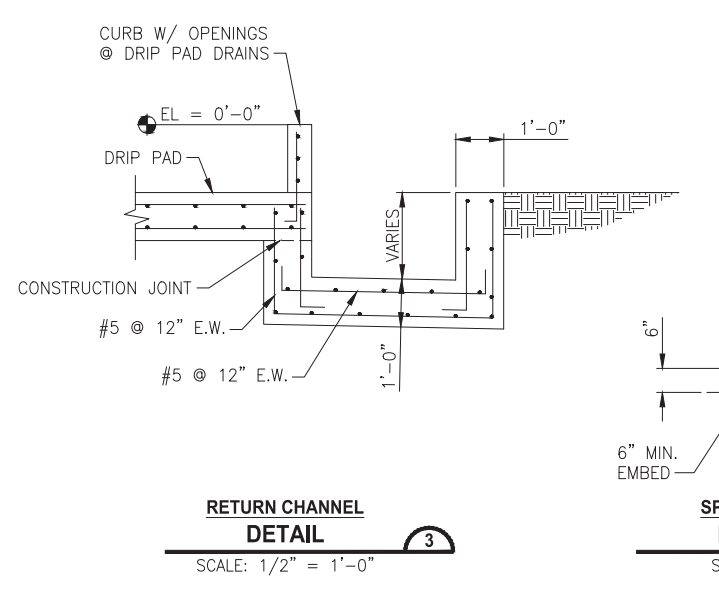
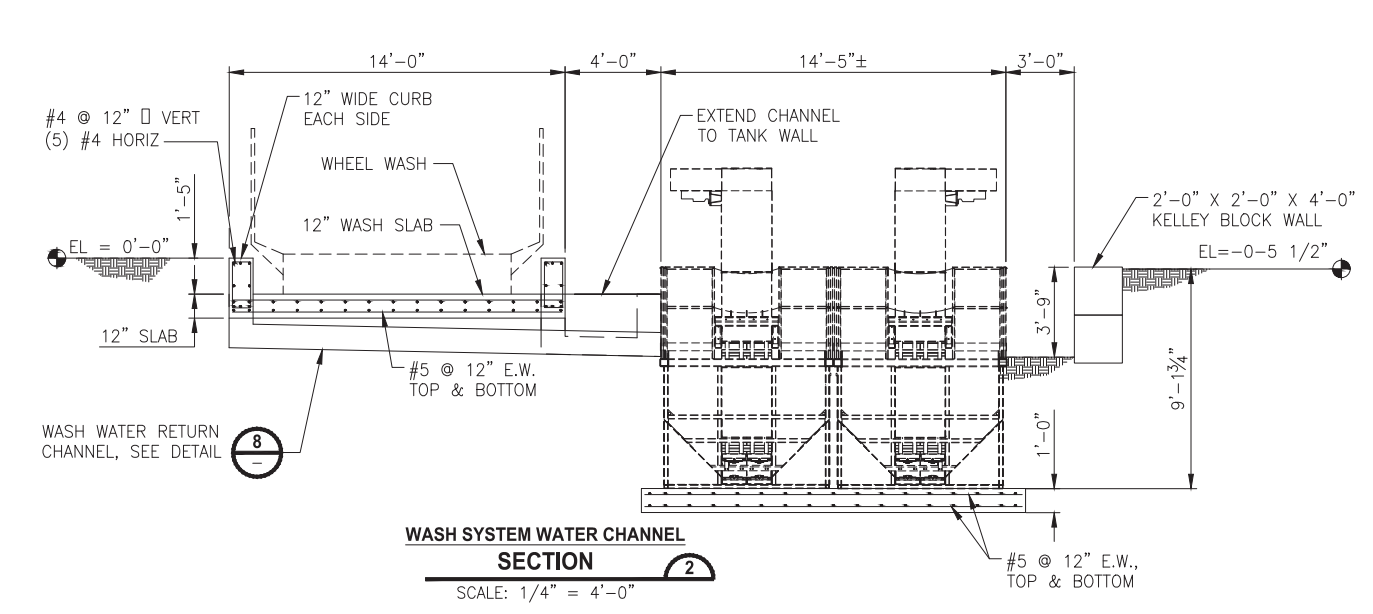
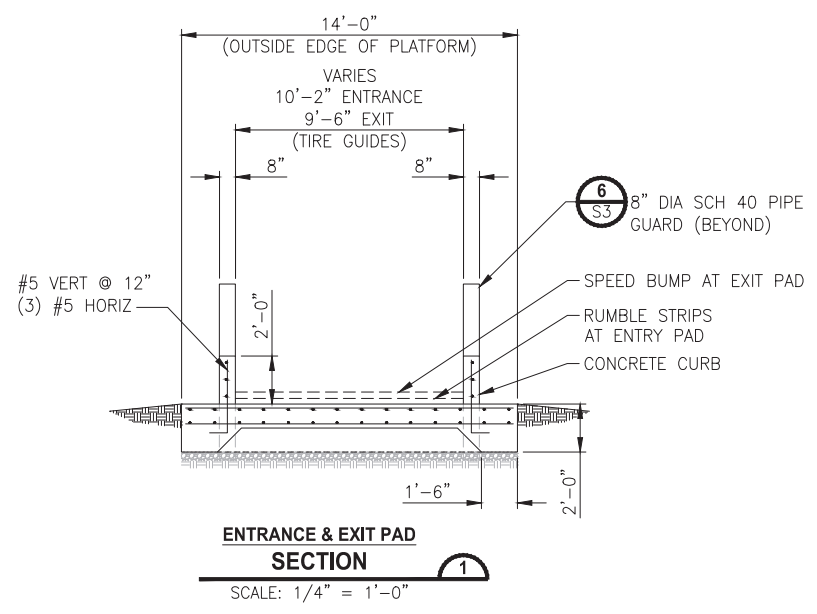
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LAYOUT: S2 PATH: U:\PSO\Projects\Clients\3312-Schnitzer\3312-Schnitzer\3312-011_MainScaleRoadWheelWash\995sca\CADD\DWG PLOTTED BY: McDonStc DATE: Wednesday, July 6, 2022 12:59:01 PM

REVISIONS	DATE	BY	DESIGNED	DRAWN	CHECKED	APPROVED
			B. SCHLACHTER	S. McDONALD	D. McINTIER	I. SUTTON

**ONE INCH AT FULL SCALE,
IF NOT, SCALE ACCORDINGLY**
FILE NAME
PS33122011_S00-S02
JOB No.
233-3312-011
DATE
JULY 2022

LAYOUT: S3
 PATH: U:\P50\Projects\Clients\3312-Schnitzer\3312-011_MainScaleWheelWash\995sca\CADD\DWG
 PLOTTED BY: McDonStc DATE: Wednesday, July 6, 2022 12:59:03 PM



- NOTES**
- EXCAVATE TO A MINIMUM DEPTH OF 18" BELOW SLABS.
 - SCARIFY SUBGRADE TO A DEPTH OF 6" AND REMOVE ANY LARGE DEBRIS. RECOMPACT SUBGRADE TO A FIRM UNYIELDING STATE.
 - PROVIDE 18" BEARING PAD CONSISTING OF MATERIALS NOTED UNDER "STRUCTURAL FILL" IN THE GEOTECHNICAL REPORT. COMPACT TO 95 PERCENT.
 - BACKFILL TANKS, RETAINING WALL AND CURBS, AS NOTED UNDER "PERMANENT RETAINING STRUCTURES" IN THE GEOTECHNICAL REPORT. COMPACT TO 90 PERCENT.

NOTE:
STEEL PIPE NOT SHOWN FOR CLARITY

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REVISIONS	DATE	BY	DESIGNED
			B. SCHLACHTER
			S. McDONALD
			D. McINTIER
			I. SUTTON

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PROJECT NAME
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 MAIN SCALE ROAD WHEEL WASH SYSTEM**
 PORTLAND, OREGON

STRUCTURAL DETAILS

DRAWING NO.
10 OF 10
S3