

TCC WOODLAND INDUSTRIAL PARK

DESIGN REVIEW SUBMITTAL 11/30/23
WOODLAND, WA

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1 VINCITY MAP
G0.00

OWNER

TRAMMELL CROW COMPANY
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PORTLAND, OR 97201
PHONE: (503) 890-5172
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SURVEYOR

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TJR PLANNING INC.
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PHONE: (360) 907-0783
CONTACT: TODD JOHNSON
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PHONE: (503) 224-9560
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E-MAIL: STUTTLE@MCKNZE.COM

GEOTECHNICAL ENGINEER

NVS
703 BROADWAY STREET, SUITE 650
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PHONE: (360) 693-8416
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CIVIL ENGINEER (SITE DESIGN)

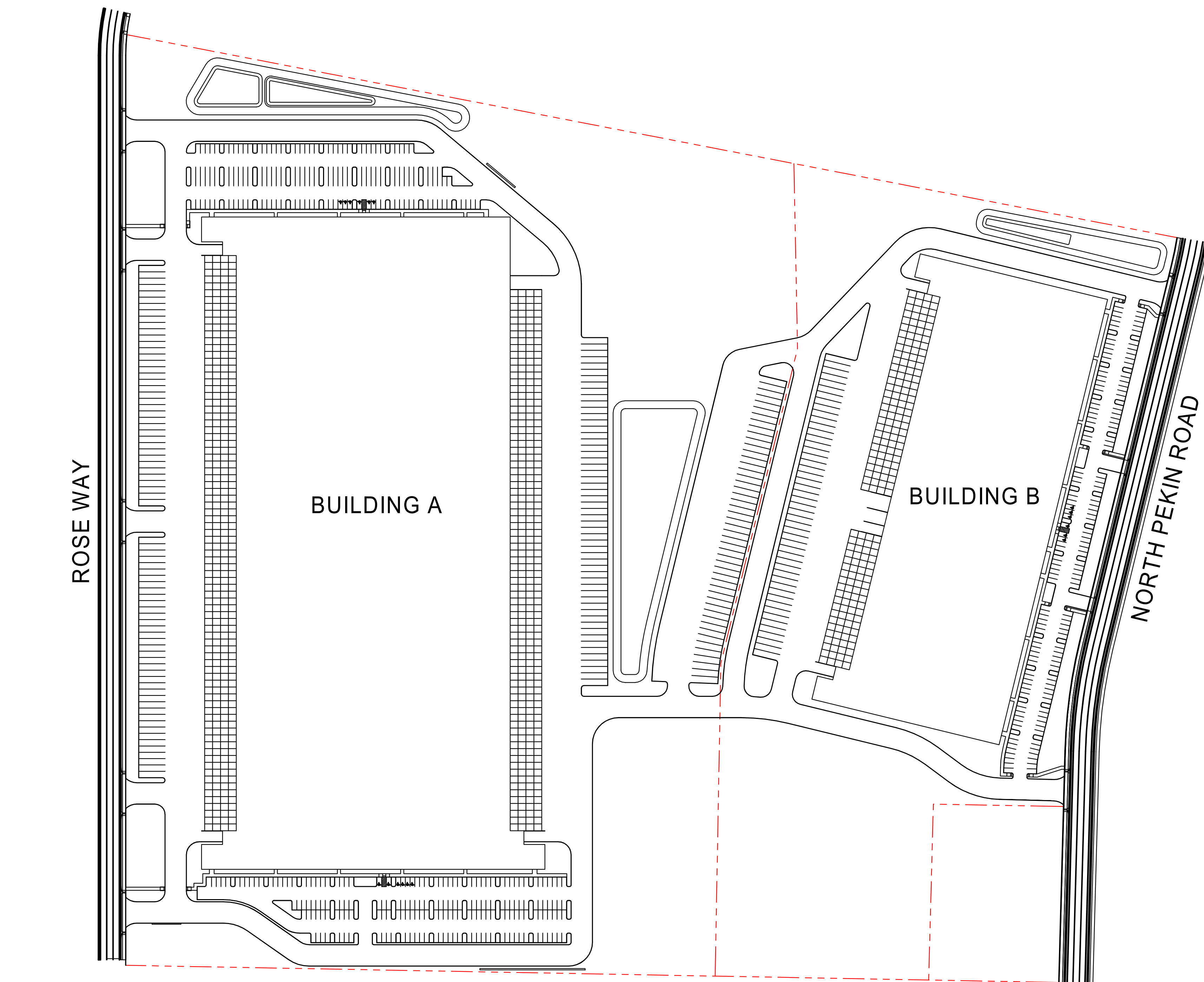
GIBBS & OLSON, INC.
1157 3RD AVE, SUITE 219
LONGVIEW, WA 98632
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CONTACT: CAROL RUIZ
E-MAIL: CRUIZ@GIBBS-OLSON.COM

CIVIL ENGINEER (PHOTOMETRICS)

MACKENZIE
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PHONE: (503) 224-9560
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ARCHITECT

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2 SITE PLAN
G0.00 3/32" = 1'-0"



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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
TITLE SHEET AND DRAWING INDEX

SHEET

G0.00

JOB NO. **2220334.00**

Trammell Crow Portland Dev, Inc.

TCC Woodland Industrial Project

Woodland, Washington



Project Directory

Owner:

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 Gibbs & Olson, Inc.
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 Phone No. 360 / 425-0991
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Vicinity Map

CITY OF WOODLAND Phone: (360) 225-7999 PUBLIC WORKS DEPARTMENT Fax: (360) 225-7467 PO Box 9 - 300 E Scott Ave Woodland, WA 98674 www.ci.woodland.wa.us	
Plans Reviewed for Compliance with City Standards and Policies	
Permit Number:	
Recommended for Approval:	Public Works Director Date
Improvement Summary	
Street Improvements	2,470 LF
Water Main Footage	1,830 LF
Sewer Main Footage	1,720 LF
Septic System Decommission	0 EA
Trenching with City Right-of-Way	1,100 LF
Total Impervious Surface	78,460 SF
Private Impervious Surface	0.95 AC
Grading	Cut CY Fill CY

CITY OF WOODLAND Phone: 360-887-4609 PO Box 9 / 230 Davidson Fax: 360-887-0862 Woodland, WA 98674 www.ci.woodland.wa.us	
Permit Number:	
Signature	Fire Chief or Designee Date

TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Cover Sheet, Vicinity Map, Project Contacts

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**
 Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

Drawing Number:
C1.0

Sheet Number:
1 of 24

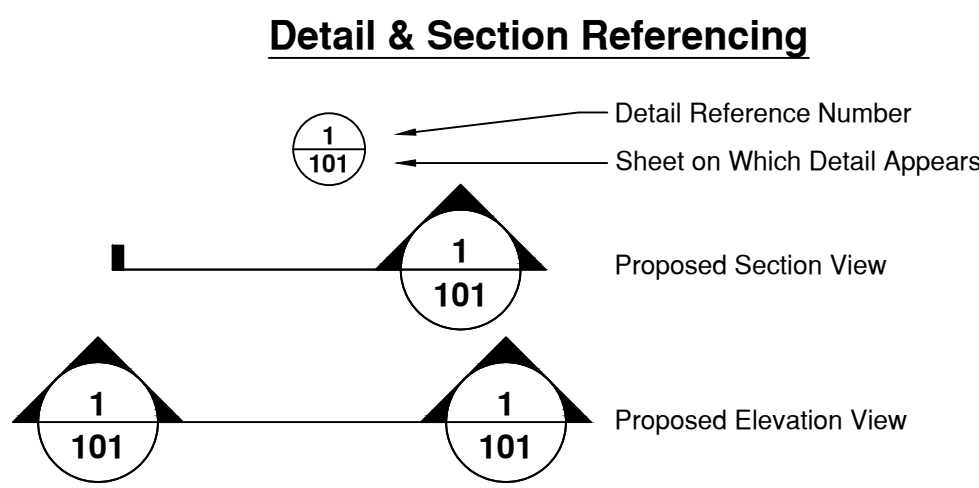
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Abbreviations

ADJ	Adjust	MH	Manhole
AC	Asphalt Concrete	MJ	Mechanical Joint
APPROX	Approximate	NAVD	North American Vertical Datum
ASPH	Asphalt	(N)	North
ASSY	Assembly	(NE)	Northeast
AVE	Avenue	(NW)	Northwest
BC	Back of Curb	NTS	Not to Scale
BFV	Butterfly Valve	OD	Outside Diameter
BLKG	Blocking	O/S	Offset
BLDG	Building	PC	Point of Curvature
BVC	Begin Vertical Curve	PE	Professional Engineer
BVCE	Begin Vertical Curve Elevation	PERF	Perforated
BVCS	Begin Vertical Curve Station	PERM	Permanent
CARV	Combination Air Release Valve	PL	Property Line
CB	Catch Basin	PT	Point of Tangency
CDF	Control Density Fill	PVC	Polyvinyl Chloride
CI	Cast Iron	PVMT	Pavement
CL	Centerline	PKG	Parking
CL	Class	PRV	Pressure Reducing Valve
CMP	Corrugated Metal Pipe	PT	Point of Tangency
CO	Clean Out	PVI	Point of Vertical Intersection
CONC	Concrete	PVIE	Point of Vertical Intersection Elevation
CONST	Construction	PVIS	Point of Vertical Intersection Station
CONTR	Contractor	R	Radius
CPSSP	Corrugated Polyethylene Storm Sewer Pipe	RBC	Rebar and Cap
CPLG	Coupling	RCW	Reclaimed Water
CSBC	Crushed Surfacing Base Course	REQD	Required
CSTC	Crushed Surfacing Top Course	RPBA	Reduced Pressure Backflow Assembly
DI	Ductile Iron	RT	Right
DIA	Diameter	ROW	Right-of-Way
DL	Daylight Earthwork	S	Slope
DS	Downspout	(S)	Slope
DTL	Detail	SD	Storm Drain
DWG	Drawing	SDCB	Storm Drain Catch Basin
DWY	Driveway	SDMH	Storm Drain Manhole
(E)	East	SDR	Sidewalk Dimension Ratio
EC	Erosion Control	(SE)	Southeast
EG	Existing Grade	SHT	Sheet
EGC	Existing Grade at Centerline	SS	Sanitary Sewer
ELEV	Elevation	SSCO	Sanitary Sewer Clean Out
EP	Edge of Pavement	SSMH	Sanitary Sewer Manhole
EVC	End Vertical Curve	SST	Stainless Steel
EVCE	End Vertical Curve Elevation	ST	Street
EVCS	End Vertical Curve Station	STA	Station
EX	Existing	STD	Standard
FCA	Flange Coupling Adapter	STRUCT	Structure
FDC	Fire Department Connection	SW	Sidewalk
FG	Finish Grade	(SW)	Southwest
FGC	Finish Grade at Centerline	TC	Top of Curb
FH	Fire Hydrant	TELE	Telephone
FL	Flow Line	TEMP	Temporary
FLG	Flange	TESC	Temporary Erosion and Sediment Control
FND	Found	THRU	Through
FOC	Face of Curb	TP	Top of Pipe
GV	Gate Valve	TRANS	Transition
HDPE	High Density Polyethylene	TYP	Typical
HMA	Hot Mix Asphalt	UNO	Unless Noted Otherwise
HORIZ	Horizontal	V	Vertical
HYD	Hydrant	VC	Vertical Curve
ILLUM	Illumination	VERT	Vertical
INV	Invert	W	With
IE	Invert Elevation	(W)	West
INT	Intersection	WSE	Water Surface Elevation
IP	Iron Pipe		
JUNCT	Junction	SYMBOLS	
LT	Left	Δ	Delta
LF	Linear Feet	#	Number
LS	Landscaped Surface	&	And
MAX	Maximum	@	At
MD	Measure Down	Ø	Diameter
MG/L	Milligrams per Liter		
MIN	Minimum		

Legends

Existing Line Types	
	Existing Major Contour
	Existing Minor Contour
	Existing Building
	Existing Cable TV - Buried
	Existing Centerline Road
	Existing Concrete, Curb, Gutter and Sidewalk
	Existing Creek/Ditch
	Existing Fence
	Existing Gas
	Existing Guardrail
	Existing Gravel
	Existing Pavement Edge
	Existing Power - Aerial
	Existing Power - Buried
	Existing Right-Of-Way
	Existing Sanitary Sewer
	Existing Sanitary Sewer Forcemain
	Existing Storm Drain
	Existing Telephone - Buried
	Existing Traffic Signal
	Existing Toe of Slope
	Existing Top of Slope
	Existing Brush Line
	Existing Water
	Existing Wetland Boundary
	Existing Wetland Buffer
Proposed Line Types	
	Proposed Alignment & Stationing
	Proposed Sanitary Sewer Line
	Proposed Water Line
	Proposed Fire Line
	Proposed Storm Drain Line
	Proposed Perforated Underdrain Pipe
	Utility to be Removed/Abandoned
	Proposed Saw Cut Line
	Proposed Silt Fencing



Existing Symbols

	Existing Yard Light
	Existing Hydrant
	Existing Water Meter
	Existing Gate Valve
	Existing Water Vault
	Existing Mail Box
	Existing Sign
	Existing Conifer Tree
	Existing Deciduous Tree
	Existing Shrub
	Existing Power Pole
	Existing Power Pole Anchor
	Existing Power Transformer
	Existing Power Vault
	Existing Sewer Cleanout
	Existing Sewer Manhole
	Existing Storm Culvert
	Existing SDCB
	Existing SDMH
	Existing Telephone Pole
	Existing Telephone Pole Anchor
	Existing Telephone Riser
	Existing Street Light
	Existing Traffic Signal
	Existing Junction Box
	Existing Gas Valve
	Existing Traffic Signal Cabinet

Proposed Symbols

	Proposed SDMH
	Proposed SDCB
	Proposed SDCO
	Proposed Fire Hydrant
	Proposed Gate Valve MJ x FLG
	Proposed Gate Valve MJ
	Proposed Fitting MJ
	Proposed Fitting FLG
	Proposed Fitting MJ x FLG
	Proposed Thrust Block
	Proposed Water Vault
	Proposed DCDA
	Proposed DCVA
	Proposed RPBA
	Proposed Water Meter
	Proposed SSMH
	Proposed SSCO
	Survey Point

General Notes

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THESE CONTRACT DOCUMENTS, THE CITY'S STANDARDS AND THE MOST CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THESE PLANS AND SPECIFICATIONS ON THE CONSTRUCTION SITE AT ALL TIMES.
- ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE CONTRACTING AGENCY.
- APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF TWO FULL WORKING DAYS PRIOR TO BEGINNING ANY EXCAVATION.
- TEMPORARY STREET PATCHING SHALL BE ALLOWED AS APPROVED BY THE CONTRACTING AGENCY. ALL TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF HOT MIX ASPHALT WITH A NOMINAL DEPTH OF 2 INCHES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY PATCHES AS REQUIRED.
- ALL EXISTING DRIVEWAYS MUST HAVE ACCESS DURING CONSTRUCTION EXCEPT WHEN ACTIVELY TRENCHING DIRECTLY IN FRONT OF THE DRIVEWAY. NO MORE THAN ONE DRIVEWAY FOR EACH BUSINESS WILL BE IMPACTED DURING TRENCHING. THE CONTRACTOR SHALL PROVIDE ACCESS TO DRIVEWAYS BY BACKFILLING THE TRENCH TO THE FINISHED GRADE OR TEMPORARILY PLACING A STEEL TRAFFIC PLATE TO ALLOW ACCESS TO EMERGENCY VEHICLES. IF CONTRACTOR ELECTS TO PLACE STEEL PLATES ANY DAMAGE TO THE EXISTING OR NEW CONCRETE DUE TO SPALLING WILL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. ACCESS TO ALL DRIVEWAYS SHALL BE PROVIDED DURING NON-WORKING HOURS. DURING CONSTRUCTION CONTRACTOR NEEDS TO COORDINATE WITH BUSINESSES AND PROVIDE PEDESTRIAN AND VEHICULAR ACCESS THROUGHOUT THE CONSTRUCTION ZONE. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH WASTE CONTROL AND PROVIDE ACCESS TO ENSURE UNINTERRUPTED GARBAGE COLLECTION FOR THE BUSINESSES.
- DRIVEWAY CLOSURE DURING CONCRETE PLACEMENT WILL BE AS SPECIFIED IN THE BUSINESS ACCESS TABLE.
- A DOUBLE SAWCUT LINE SHALL BE USED WHERE EXISTING CONCRETE STREET PANELS AND SIDEWALK ARE TO BE SAWCUT ABUTTING CONCRETE PANELS AND CURBS TO REMAIN. THE CONTRACTOR SHALL LEAVE A 6" WIDE STRIP OF CONCRETE AROUND THE PERIMETER OF THE PANEL / SIDEWALK DURING REMOVAL OF THE CONCRETE. THE STRIP SHALL BE REMOVED PRIOR TO EXCAVATION.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OTHER UTILITIES AS NEEDED FOR THE DURATION OF THE PROJECT.
- CONTRACTOR TO POTHOLE AND VERIFY PIPE SIZE, TYPE AND INVERTS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR CONSTRUCTION OF UPSTREAM UTILITIES.
- CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITY TYPE, SIZE OR INVERT ELEVATIONS DIFFER FROM INFORMATION SHOWN ON THE CONTRACT DRAWINGS.
- CONTRACTOR IS REQUIRED TO MAINTAIN EXISTING ILLUMINATION WHILE THE NEW STREET LIGHTING CONDUIT AND JUNCTION BOXES ARE BEING INSTALLED. AFTER THE NEW CONDUITS ARE INSTALLED, CONTRACTOR CAN INTERCEPT EXISTING CONDUIT AND COMPLETE THE FINAL CONNECTION AND TRANSFER.

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4	C2.0	Site Plan
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TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Notes, Legends, Abbreviations, Sheet & Drawing Index

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**
 Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

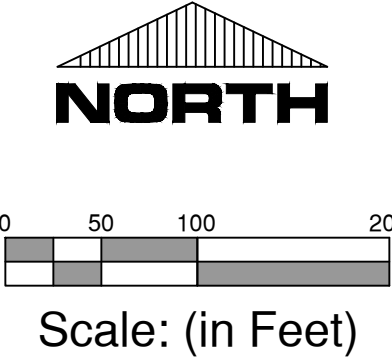
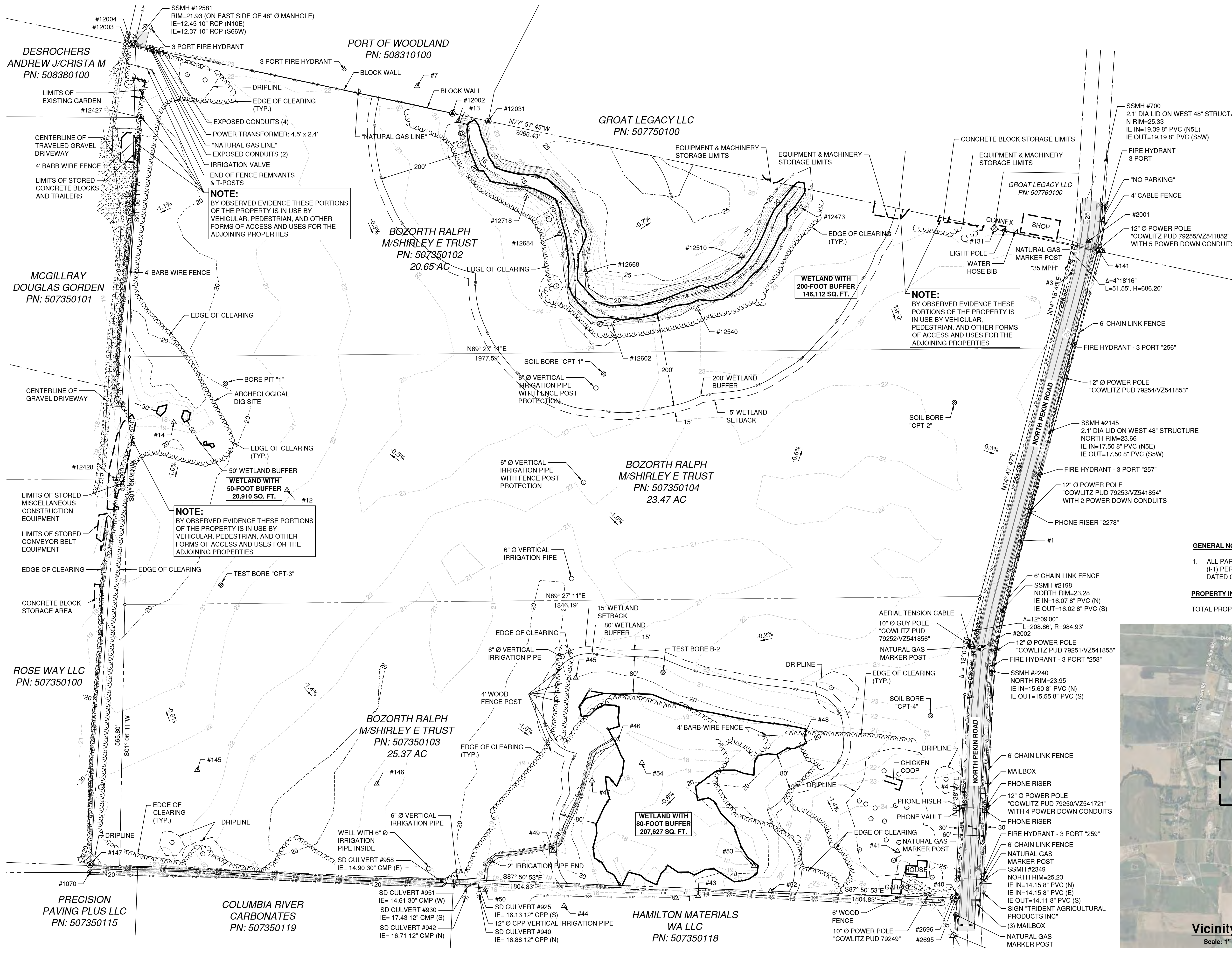
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Sheet Number:
2 of **24**

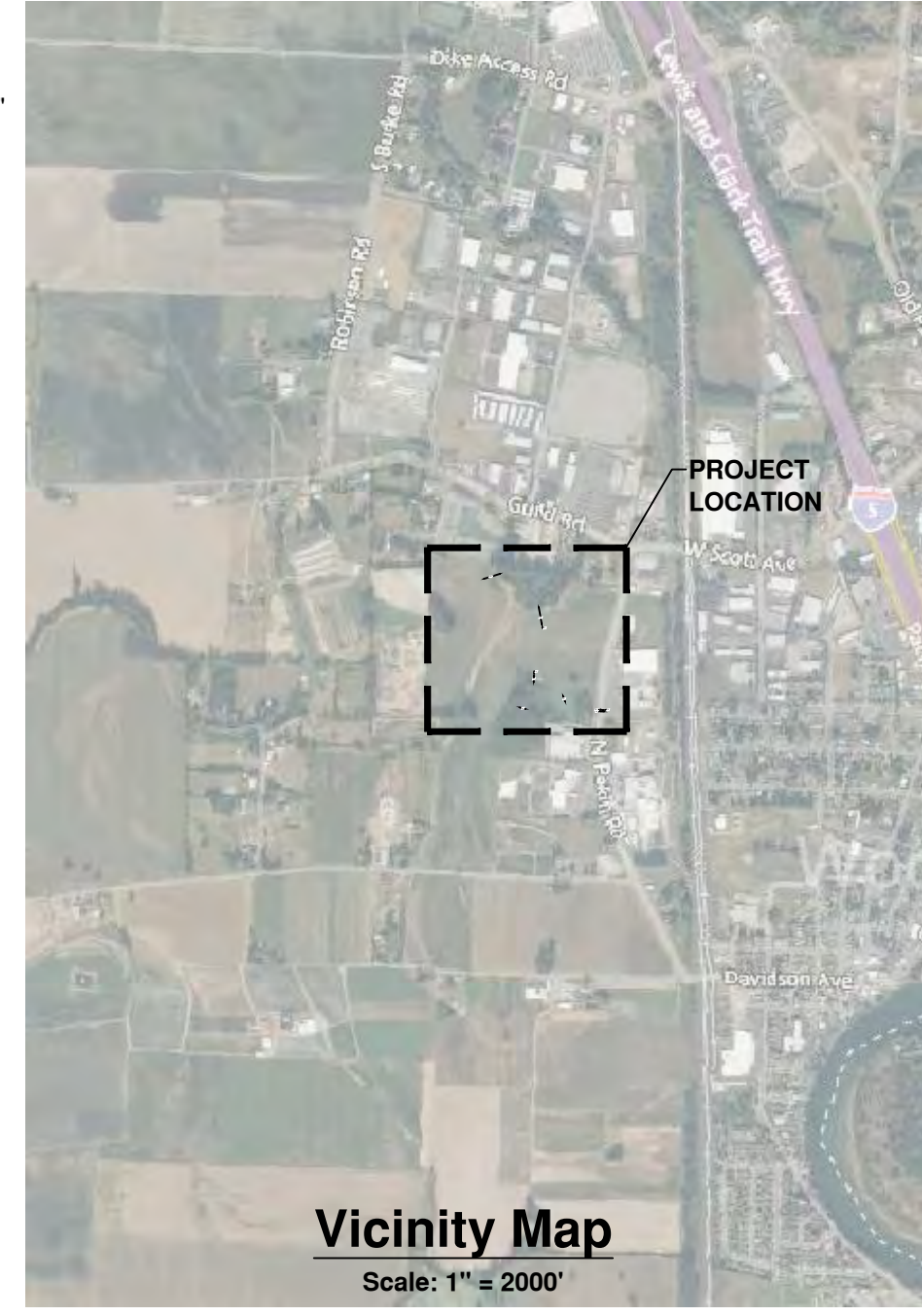
Know what's below.
Call 811 before you dig.

CAUTION: LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE AND MAY NOT BE ACCURATE OR ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION AND DEPTH OF UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION.

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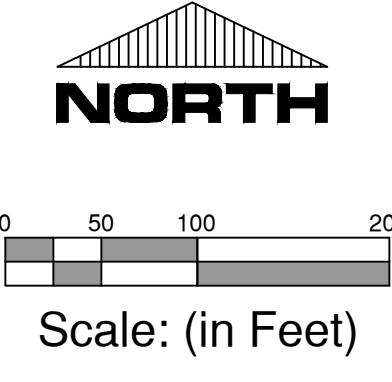
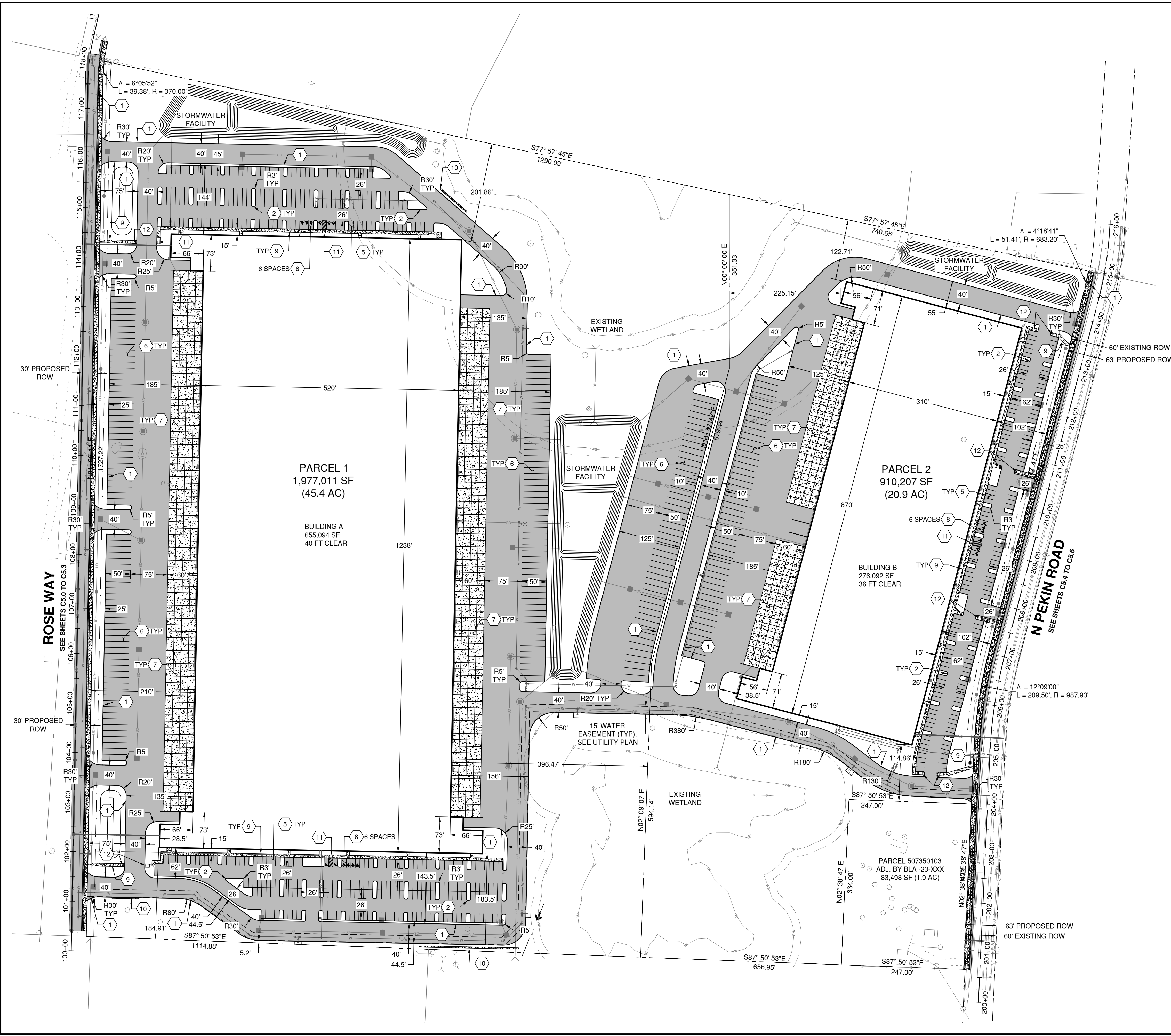


TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Existing Conditions Plan



Datum: NAD83 / NAVD 88
Survey Book: 1900, 1900 A & B
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Date: 11-29-2023
Designed by: KWB
Checked by: CLR
Approved by: KWB
Project Number: 0788.0259
Drawing Number: C1.2
Sheet Number: 3 of 24

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LEGEND:

- ASPHALT PAVEMENT
- CEMENT CONCRETE
- LANDSCAPING
- MODULAR BLOCK WALL

SITE CONSTRUCTION NOTES:

1. CONSTRUCT STANDARD TYPE E-1 CURB PER COW STD T-01.
2. CONSTRUCT STANDARD TYPE E-1 CURB AROUND PERIMETER OF LANDSCAPE ISLANDS AND PARKING LOT PER COW STD T-01.
3. NOT USED.
4. NOT USED.
5. INSTALL 9-FT BY 18-FT PASSENGER VEHICLE PARKING STALLS USING 4-INCH WIDE WHITE PAINT LINES.
6. INSTALL 12-FT BY 50-FT TRUCK PARKING STALLS USING 4-INCH WIDE WHITE PAINT LINES.
7. INSTALL 13-FT BY 60-FT TRUCK PARKING STALLS USING 4-INCH WIDE WHITE PAINT LINES.
8. INSTALL 9-FT BY 18-FT ACCESSIBLE PARKING STALLS PER WSDOT STD PLAN M-17-10-02.
9. CONSTRUCT 6-FT SIDEWALK PER COW STD T-07.
10. CONSTRUCT MODULAR BLOCK WALL. WALL TO BE MAX 4-FT HIGH.
11. CONSTRUCT PARALLEL CURB RAMP PER COW STD T-16.
12. CONSTRUCT PERPENDICULAR CURB RAMP PER COW STD T-17.

GENERAL SITE NOTES:

1. WITHIN ALL AREAS THAT HAVE BEEN SUBJECT TO CLEARING AND GRADING, ALL GRASS AND LANDSCAPED AREAS SHALL HAVE A MINIMUM 8-INCH SETTLED TOPSOIL LAYER PRIOR TO SEEDING AND PLANTING THAT MEETS THE CRITERIA PER BMP 15.13 IN THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL. V.

LEGEND

Total Site Area: ± 2,943,645 SF (67.6 AC)		
Areas	Sq Ft	% of Total
Proposed Building	931,186 SF	31.6%
Impervious	1,993,041 SF	67.7%
Landscaping	950,604 SF	32.3%
Parking (Pass. Vehicle)	87,966 SF	3.0%
Parking Spaces		
Total (Pass. Vehicle)	540	
Standard	522	
ADA	18	
Compact	0	
Truck Parking	229	



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Site Plan

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**
 Date: **11-29-2023**



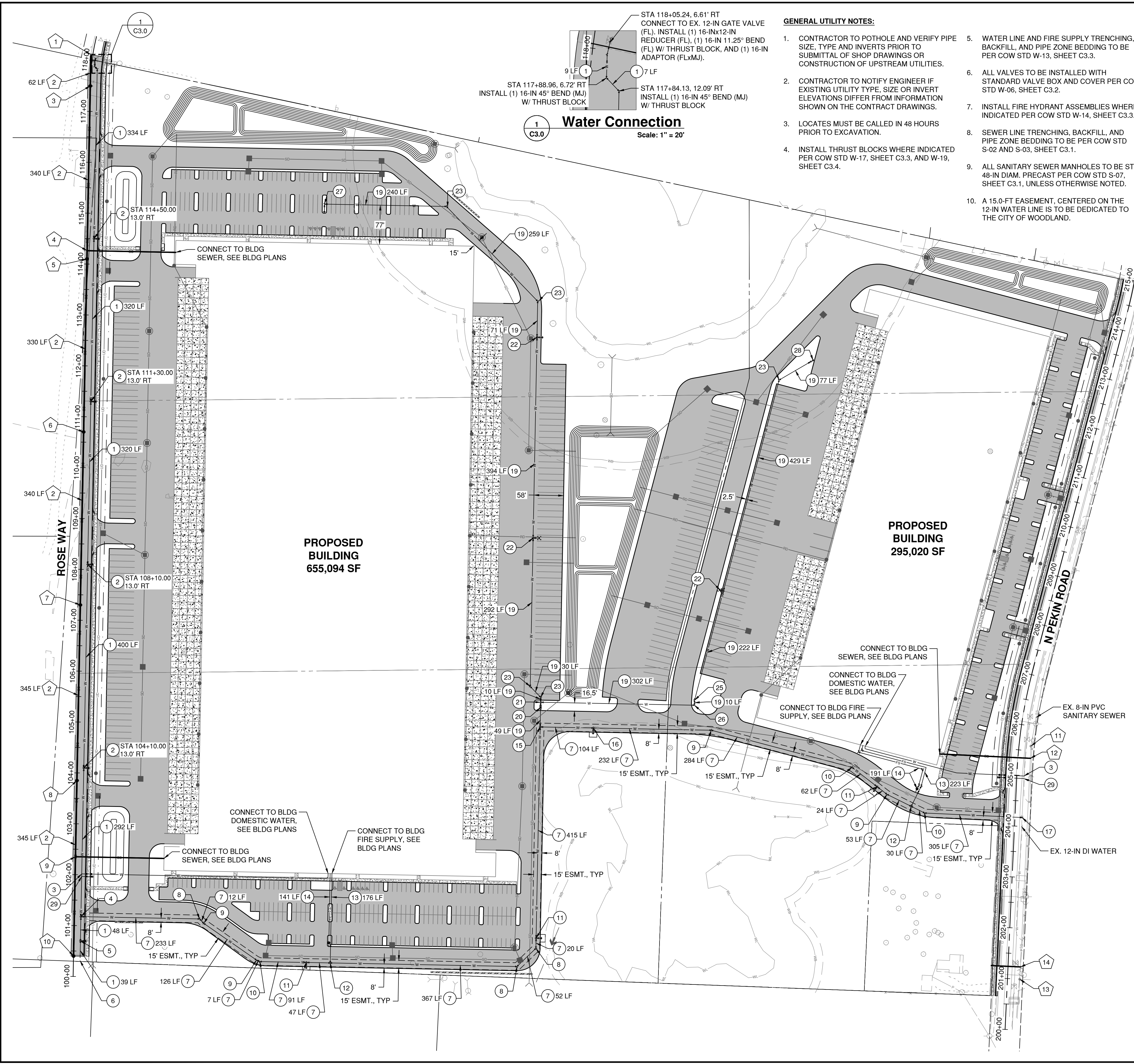
Designed by: **KWB**
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Project Number:
0788.0259

Drawing Number:
C2.0

Sheet Number:
4 of 24

DRAWING: T:\PROJECTS\0788_MISC_ENG_PROJECT\0259_BOZORTH_PROPERTY_SURVEY_CONTRACT_DRAWINGS\07880259_UTILITY_PLANNING_LAYOUT_TAB_C3.0_PLOT_DATE: 11/29/2023 1:56:03 PM, DRAWING SAVE DATE: 11/21/2023 10:56:08 AM, PLOTTED BY: KBUSSY
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GENERAL UTILITY NOTES:

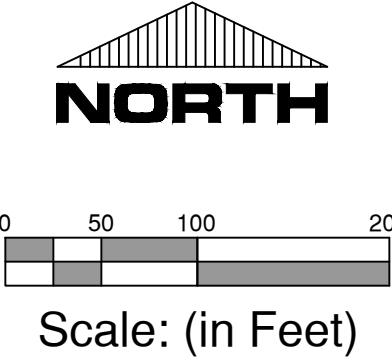
- CONTRACTOR TO POT HOLE AND VERIFY PIPE SIZE, TYPE AND INVERTS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR CONSTRUCTION OF UPSTREAM UTILITIES.
- CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITY TYPE, SIZE OR INVERT ELEVATIONS DIFFER FROM INFORMATION SHOWN ON THE CONTRACT DRAWINGS.
- LOCATES MUST BE CALLED IN 48 HOURS PRIOR TO EXCAVATION.
- INSTALL THRUST BLOCKS WHERE INDICATED PER COW STD W-17, SHEET C3.3, AND W-19, SHEET C3.4.
- WATER LINE AND FIRE SUPPLY TRENCHING, BACKFILL, AND PIPE ZONE BEDDING TO BE PER COW STD W-13, SHEET C3.3.
- ALL VALVES TO BE INSTALLED WITH STANDARD VALVE BOX AND COVER PER COW STD W-06, SHEET C3.2.
- INSTALL FIRE HYDRANT ASSEMBLIES WHERE INDICATED PER COW STD W-14, SHEET C3.3.
- SEWER LINE TRENCHING, BACKFILL, AND PIPE ZONE BEDDING TO BE PER COW STD S-02 AND S-03, SHEET C3.1.
- ALL SANITARY SEWER MANHOLES TO BE STD 48-IN DIAM. PRECAST PER COW STD S-07, SHEET C3.1, UNLESS OTHERWISE NOTED.
- A 15.0-FT EASEMENT, CENTERED ON THE 12-IN WATER LINE IS TO BE DEDICATED TO THE CITY OF WOODLAND.

LEGEND:

- WATERLINE
- FIRE SUPPRESSION LINE
- SANITARY SEWER LINE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION (FDC)
- WATER METER
- REDUCED PRESSURE BACKFLOW PREVENTER (RPBA)
- DOUBLE CHECK VALVE ASSEMBLY (DCVA)
- DOUBLE CHECK DETECTOR ASSEMBLY (DCDA)
- MJ x MJ FITTING
- FL x FL FITTING
- FL x MJ GATE VALVE
- MJ x MJ GATE VALVE
- FL x MJ BUTTERFLY VALVE
- FL x FL CHECK VALVE
- FL x MJ REDUCER
- FL x MJ ADAPTER
- THRUST BLOCK
- SANITARY SEWER MANHOLE (SSMH)
- SANITARY SEWER CLEANOUT (SSCO)

SEWER CONSTRUCTION NOTES:

- STA 118+11.37, 3.98' LT. CONNECT TO EXISTING SSMH PER COW STD S-10, SHEET C3.2.
RIM = 21.93
IE IN = 12.45 12-INCH PVC (S) (NEW)
IE OUT = 12.37 12-INCH PVC (N) (EX)
- INSTALL 12-INCH PVC ASTM D3034 SANITARY SEWER LINE @ S=0.0022 FT/FT MIN.
- STA 117+50.00 ON CL. INSTALL SSMH.
RIM = 21.17
IE IN = 12.79 12-INCH PVC (S)
IE OUT = 12.59 12-INCH PVC (N)
- STA 114+26.26 ON CL. INSTALL 6-IN PVC ASTM D3034 SERVICE LATERAL CONNECTION @ S=0.02 FT/FT MIN PER COW STD S-04.
- STA 114+10.00 ON CL. INSTALL SSMH.
RIM = 20.07
IE IN = 13.73 12-IN PVC (S)
IE OUT = 13.53 12-IN PVC (N)
- STA 110+70.00 ON CL. INSTALL SSMH.
RIM = 20.47
IE IN = 14.68 12-IN PVC (S)
IE OUT = 14.48 12-IN PVC (N)
- STA 107+30.00 ON CL. INSTALL SSMH.
RIM = 21.67
IE IN = 15.63 12-IN PVC (S)
IE OUT = 15.43 12-IN PVC (N)
- STA 103+85.00 ON CL. INSTALL SSMH.
RIM = 21.94
IE IN = 16.59 12-IN PVC (S)
IE OUT = 16.39 12-IN PVC (N)
- STA 102+35.26 ON CL. INSTALL 6-IN PVC ASTM D3034 SERVICE LATERAL CONNECTION @ S=0.02 FT/FT MIN PER COW STD S-04.
- STA 100+40.00 ON CL. INSTALL SSMH.
RIM = 25.26
IE OUT = 17.35 12-IN PVC (N)
- STA 205+59.66, 23.44' RT. RETAIN EX. SSMH.
RIM = 23.95
IE IN = 15.60 8-IN PVC (N) (EX)
IE OUT = 15.55 8-IN PVC (S) (EX)
- STA 205+35.23, 24.46' RT. TAP EX. 8-IN PVC AND INSTALL 6-IN PVC ASTM D3034 SERVICE LATERAL CONNECTION @ S=0.02 FT/FT MIN PER COW STD S-04.
- STA 200+99.72, 24.18' RT. RETAIN EX. SSMH.
RIM = 25.23
IE IN = 14.15 8-IN PVC (N) (EX)
IE IN = 14.15 8-IN PVC (E) (EX)
IE OUT = 14.11 8-IN PVC (S) (EX)
- STA 201+24.00, 24.22' RT. TAP EX. 8-IN PVC AND INSTALL 6-IN PVC ASTM D3034 SERVICE LATERAL CONNECTION @ S=0.02 FT/FT MIN PER COW STD S-04.
- INSTALL 16-IN CL52 DI WATER MAIN.
- INSTALL (1) 16-IN BUTTERFLY VALVE (FLxMJ), (1) 16-INx6-IN TEE (FL) W/ THRUST BLOCK, (1) FIRE HYDRANT, AND (1) 16-IN ADAPTOR (FLxMJ).
- INSTALL (1) 2-IN WATER SERVICE PER COW STD W-03, AND (1) 2-IN RPBA PER COW STD W-09A.
- STA 101+17.76, 13.0' RT. INSTALL (1) 16-IN BUTTERFLY VALVE (FLxMJ), (1) 16-INx12-IN TEE (FL) W/ THRUST BLOCK, AND (1) 16-IN ADAPTOR (FLxMJ).
- STA 100+70.00, 13.0' RT. INSTALL (1) 16-IN BUTTERFLY VALVE (MJ), (1) 16-INx6-IN TEE (MJ) W/ THRUST BLOCK, AND (1) FIRE HYDRANT.
- STA 100+31.24, 13.0' RT. INSTALL (1) STANDARD BLOWOFF PER COW STD W-10.
- INSTALL 12-IN CL52 DI WATER MAIN.
- INSTALL (1) 12-IN 45° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 12-IN 11.25° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 12-IN 22.5° BEND (MJ) W/THRUST BLOCK.
- INSTALL (1) 12-IN GATE VALVE (FLxMJ), (1) 12-INx6-IN TEE (FL) W/ THRUST BLOCK, (1) FIRE HYDRANT, (1) 12-IN ADAPTOR (FLxMJ).
- INSTALL (1) 12-INx6-IN TEE (MJ) W/ THRUST BLOCK.
- INSTALL 6-IN CL52 DI FIRE SUPPLY (INC. FITTINGS) WITH POST INDICATOR VALVE PER DETAIL 2, SHEET C3.4.
- INSTALL 4-IN CL52 DI FIRE SUPPLY (INC. FITTINGS) WITH CHECK VALVE AND FDC PER DETAIL 3, SHEET C3.4.
- INSTALL (1) 12-IN TEE (FL) W/ THRUST BLOCK, (2) GATE VALVES (FLxMJ) (S, E), AND (1) 12-INx8-IN REDUCER (FLxMJ) (N).
- INSTALL (1) 12-INx6-IN TEE (MJ) W/ THRUST BLOCK, AND (1) FIRE HYDRANT.
- STA 204+17.45, 14.00' RT. CONNECT TO EX. 12-IN DI WATER W/ (1) 12-INx12-IN STAINLESS STEEL TAPPING SLEEVE W/ THRUST BLOCK AND (1) 12-IN TAPPING VALVE (FLxMJ).
- STA 204+99.09, 14.00' RT. INSTALL (1) 2-IN WATER SERVICE PER COW STD W-03, SHEET C3.1, AND (1) 2-IN RPBA PER COW STD W-09A.
- INSTALL 8-IN CL52 DI WATER MAIN.
- INSTALL 8-IN DCDA PER DETAIL 1, SHEET C3.4.
- INSTALL (1) 8-IN ADAPTOR (FLxMJ), (1) 8-IN TEE (FL) W/ THRUST BLOCK, AND (1) 8-IN GATE VALVE (FLxMJ).
- INSTALL (1) 8-IN ADAPTOR (FLxMJ), (1) 8-INx6-IN TEE (FL) W/ THRUST BLOCK, (1) FIRE HYDRANT, AND (1) 8-IN GATE VALVE (FLxMJ).
- INSTALL (1) 8-IN 45° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 8-IN 22.5° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 8-IN 90° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 8-IN 11.25° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 8-IN 90° BEND (MJ) W/ THRUST BLOCK.
- INSTALL (1) 8-INx6-IN REDUCER (FLxMJ), (1) 6-IN 90° BEND (FL) W/ THRUST BLOCK, AND (1) FIRE HYDRANT.
- INSTALL (1) 8-INx6-IN REDUCER (FLxMJ) AND (1) FIRE HYDRANT.
- INSTALL (1) 2-IN WATER SERVICE FOR IRRIGATION PER COW STD W-03, AND (1) 2-IN RPBA PER COW STD W-09A.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Utility Plan

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: 60%
 Date: 11-29-2023

Designed by: KWB
 Checked by: CLR
 Approved by: KWB

Project Number:
0788.0259

Drawing Number:
C3.0

Sheet Number:
5 of 24

GENERAL NOTES FOR SANITARY SEWER

ALL MATERIALS AND INSTALLATION OF SANITARY SEWERS SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, HERINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS", PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, EXCEPT AS NOTED HEREIN OR ON THE STANDARD PLANS. WHEREVER THE STANDARD SPECIFICATIONS REFER TO THE OWNER AS EITHER THE "STATE" OR "SECRETARY" OR WHEN REFERENCE IS MADE TO THE DEPARTMENT OF TRANSPORTATION IT SHALL BE UNDERSTOOD THAT THE STANDARD SPECIFICATIONS SHOULD READ THE "CITY".

ALL SANITARY SEWER CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF WOODLAND PUBLIC WORKS DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE CITY AT (360) 225-7999 AT LEAST 48-HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION CONFERENCE MAY BE REQUIRED.

THE CONTRACTOR IS REQUIRED TO NOTIFY ALL UTILITIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST CONTACT THE UNDERGROUND UTILITY NOTIFICATION CENTER "CALL BEFORE YOU DIG" AT (800) 424-5555 OR "811".

FINAL ACCEPTANCE OF SANITARY SEWERS ARE SUBJECT TO SECTIONS 1-05.11, 1-05.12, 7-17.3(2)E, 7-17.3(2)F, 7-17.3(2)G AND 7-17.3(2)H OF THE STANDARD SPECIFICATIONS. TELEVISION INSPECTION SHALL INCLUDE VIDEO OF ALL MANHOLES IN ADDITION TO THE PIPE. THE CONTRACTOR SHALL WARRANTY ALL WORK DONE UNDER CITY CONTRACT FOR A PERIOD OF TWO (2) YEARS AS PER OF THE CITY OF WOODLAND GENERAL PROVISIONS FOR MUNICIPAL CONSTRUCTION.

LOCAL VARIATIONS IN SLOPE (I.E. "BELLEYS") MUST BE NO MORE THAN 1/2" MAXIMUM. VARIATIONS IN EXCESS OF THESE TOLERANCES MUST BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY.

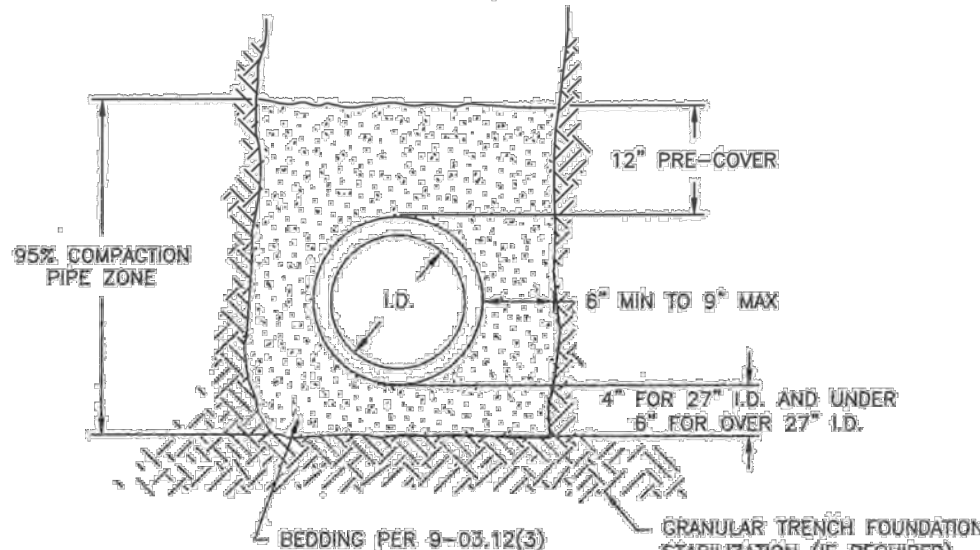
ALL PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
 A. POLYVINYL CHLORIDE (PVC) SEWER PIPE 15" DIAMETER OR LESS SHALL CONFORM TO ASTM D3034, SDR 35. IT SHALL HAVE A MINIMUM PIPE STIFFNESS OF 46 PSI. PVC PIPE 18" DIAMETER SHALL CONFORM TO ASTM F 679. ALL PVC PIPE SHALL HAVE AN INTEGRAL BELL GASKETED JOINT WITH ELASTOMERIC GASKET AND SHALL BE FURNISHED IN 12-1/2 FOOT LAYING LENGTHS.
 B. DUCTILE IRON (DI) PIPE SHALL CONFORM TO ANSI A21.51 OR AWWA C151, WITH PUSH-ON JOINTS, CLASS 52, UNLESS OTHERWISE NOTED.

INSTALLATION OF PIPE AND MANHOLES SHALL CONFORM TO THE FOLLOWING:
 A. PIPE SHALL BE INSTALLED IN CONFORMANCE WITH DETAIL S-02.
 B. MANHOLES SHALL CONFORM WITH STANDARD DETAILS S-07 THROUGH S-14.
 C. RESTORATION SHALL CONFORM WITH STANDARD DETAIL T-33.

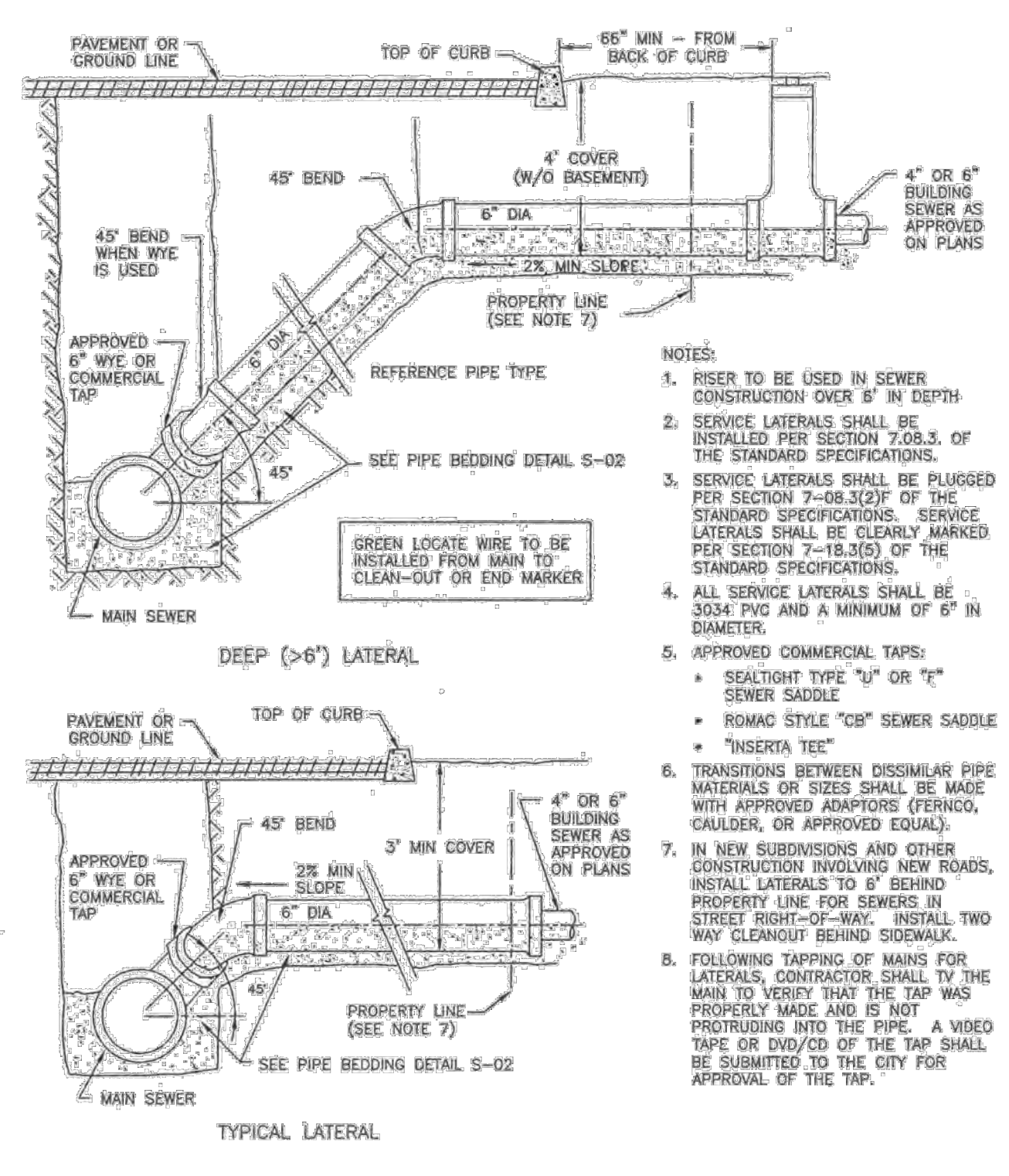
MANHOLES, CLEANOUTS, SERVICE LATERAL CONNECTIONS, TRENCH EXCAVATION, PIPE BEDDING AND STREET RESTORATION, AND APPURTENANCES SHALL CONFORM TO THE CITY OF WOODLAND STANDARD PLANS. THE WSDOT STANDARD DETAILS CONTAINED AND THE STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ALL PERMITS ISSUED OR EASEMENTS GRANTED TO THE CITY IN CONJUNCTION WITH THE CONSTRUCTION OF SANITARY SEWERS. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

THE CONTRACTOR SHALL SUBMIT AN APPROVED TRAFFIC CONTROL PLAN. APPROVAL SHALL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.



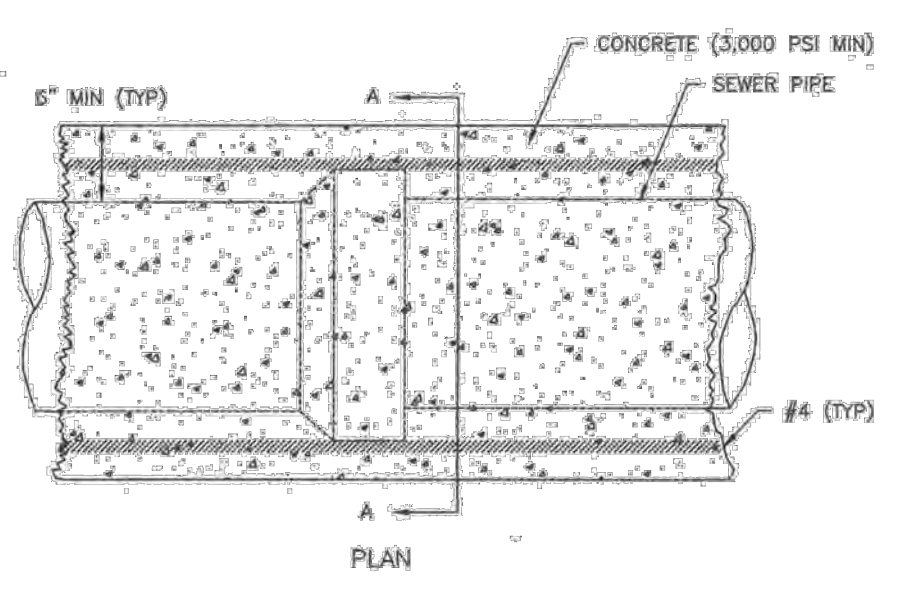
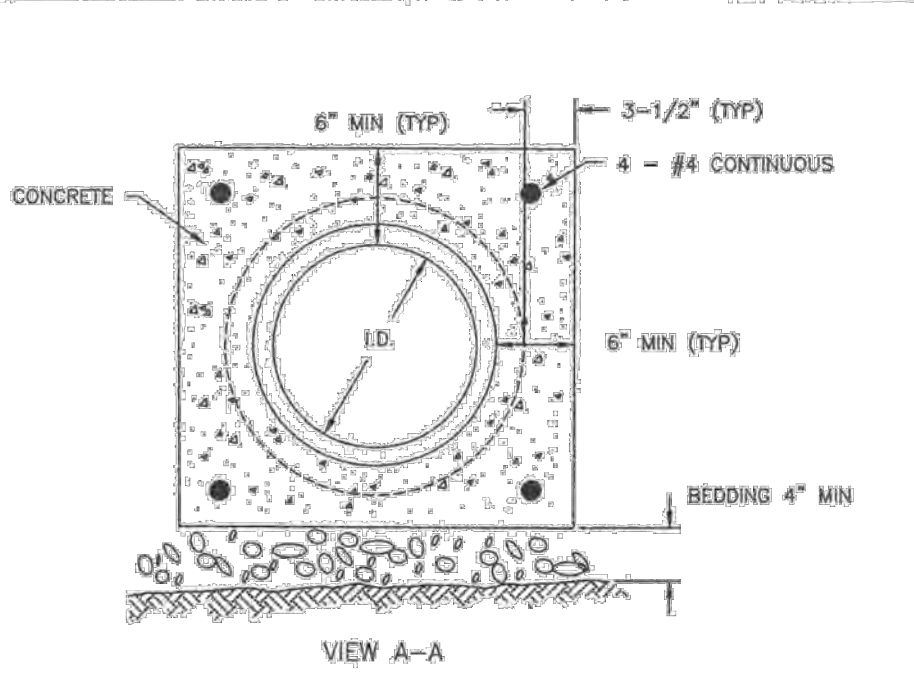
- NOTES:
- WHERE DIRECTED BY THE ENGINEER GRANULAR TRENCH FOUNDATION STABILIZATION SHALL BE PLACED PRIOR TO PLACEMENT OF THE BEDDING. SIZE AND DEPTH ARE DEPENDENT ON SOIL CONDITIONS.
 - BEDDING AND BACKFILL MATERIALS IN THE PIPE ZONE SHALL BE COMPACTED AS SPECIFIED PRIOR TO BACKFILLING THE REMAINDER OF THE TRENCH.
 - FOR ROCK AND OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVER-EXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR MATERIALS AS DIRECTED BY THE ENGINEER.
 - BACKFILL AND COMPACTION ABOVE THE PIPE ZONE SHALL BE AS SHOWN IN TRENCHING DETAIL S-03.
 - PVC PIPE INSTALLATION SHALL CONFORM TO UNIBELL PLASTIC PIPE ASSOCIATION STANDARD SPEC. UNI-B-5 (LATEST EDITION) EXCEPT AS NOTED.
 - FINAL INSTALLATION TO BE TESTED PER SECTION 7-17.3 OF THE STANDARD SPECIFICATIONS.
 - ALTERNATE PRE-COVER MATERIALS ARE ALLOWABLE FROM PIPE CENTERLINE TO ONE FOOT ABOVE THE TOP OF PIPE. ALTERNATE PRE-COVER MATERIALS MUST BE PRE-APPROVED BY THE INSPECTOR AND MAY BE SAND, CRUISER SCREENINGS, GRAVEL, OR OTHER CLEAN GRANULAR MATERIAL CONTAINING NO ROCK LARGER THAN 1-1/4" IN LENGTH.
- APPROVAL FOR ALTERNATE MATERIALS WILL BE GRANTED UPON CONFIRMATION BY TEST OF ITS COMPLIANCE WITH THESE REQUIREMENTS. SUBMIT 50 LB SAMPLE FOR TESTING TO THE CITY INSPECTOR AND OBTAIN MATERIAL PRIOR TO STARTING PIPE INSTALLATION WORK. THE TEST REQUIRES A MINIMUM OF FIVE BUSINESS DAYS TO COMPLETE.
- TRENCH WIDTH SHALL NOT EXCEED ONE AND ONE-HALF THE INSIDE DIAMETER OF THE PIPE PLUS 18" AT THE TOP OF THE PIPE ZONE. ANY SUBSIDENCE OF SURROUNDING PAVEMENT DUE TO TRENCHING SHALL BE EXCAVATED BEYOND ORIGINAL PAVEMENT OR TRENCH LIMITS AND REPAIRED TO SATISFACTION OF THE CITY OF WOODLAND.
 - NATIVE MATERIAL MAY BE USED, OUTSIDE OF THE ROAD PRISM FOR DUCTILE IRON IN LIEU OF IMPORTED MATERIAL FOR BEDDING SPECIFIED, PROVIDED THAT THE NATIVE MATERIAL CONFORMS TO SECTION 9-03.15 OF THE STANDARD SPECIFICATIONS, AND AS APPROVED BY THE CITY OF WOODLAND. THE CONTRACTOR SHALL SUBMIT A SAMPLE OF THE NATIVE MATERIAL TO THE CITY OF WOODLAND AT LEAST 72-HOURS PRIOR TO USE. THE CITY MAY APPROVE, REJECT, OR REQUIRE LABORATORY TESTING OF THE MATERIAL.



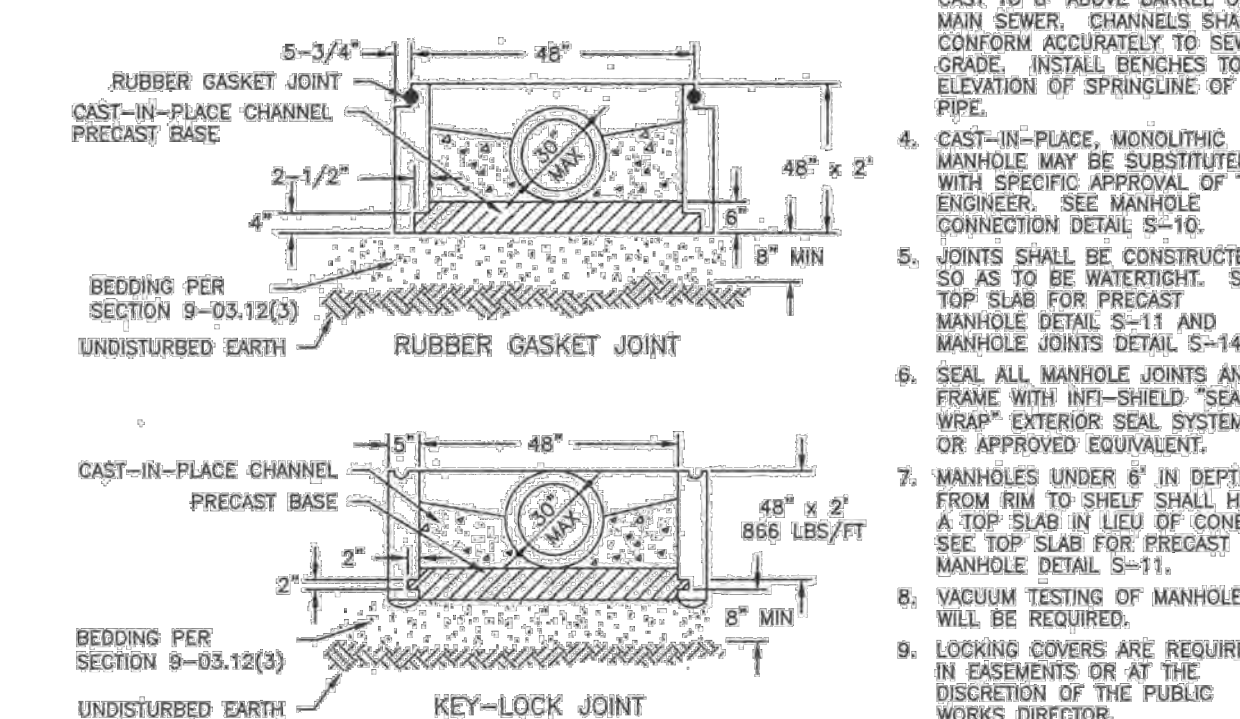
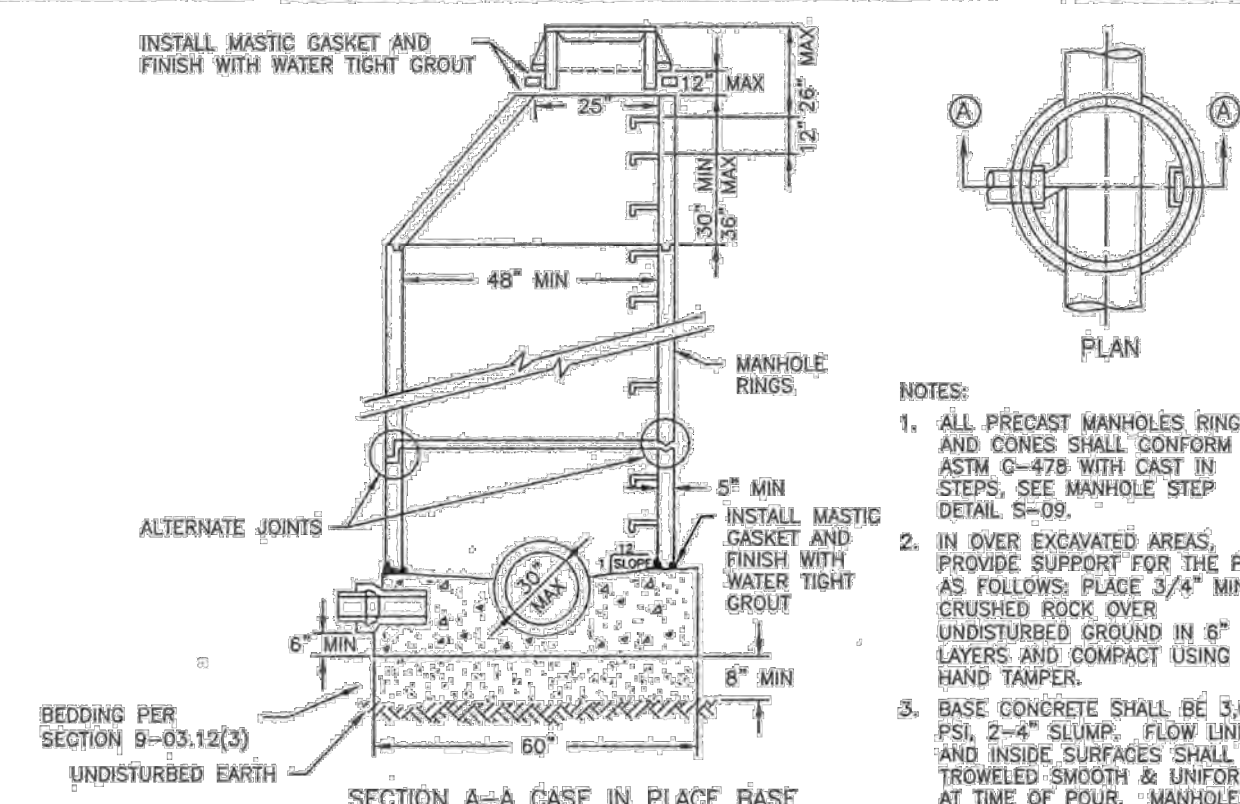
GENERAL NOTES FOR SANITARY SEWER					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-01
PUBLIC WORKS DIRECTOR					

PIPE BEDDING					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-02
PUBLIC WORKS DIRECTOR					

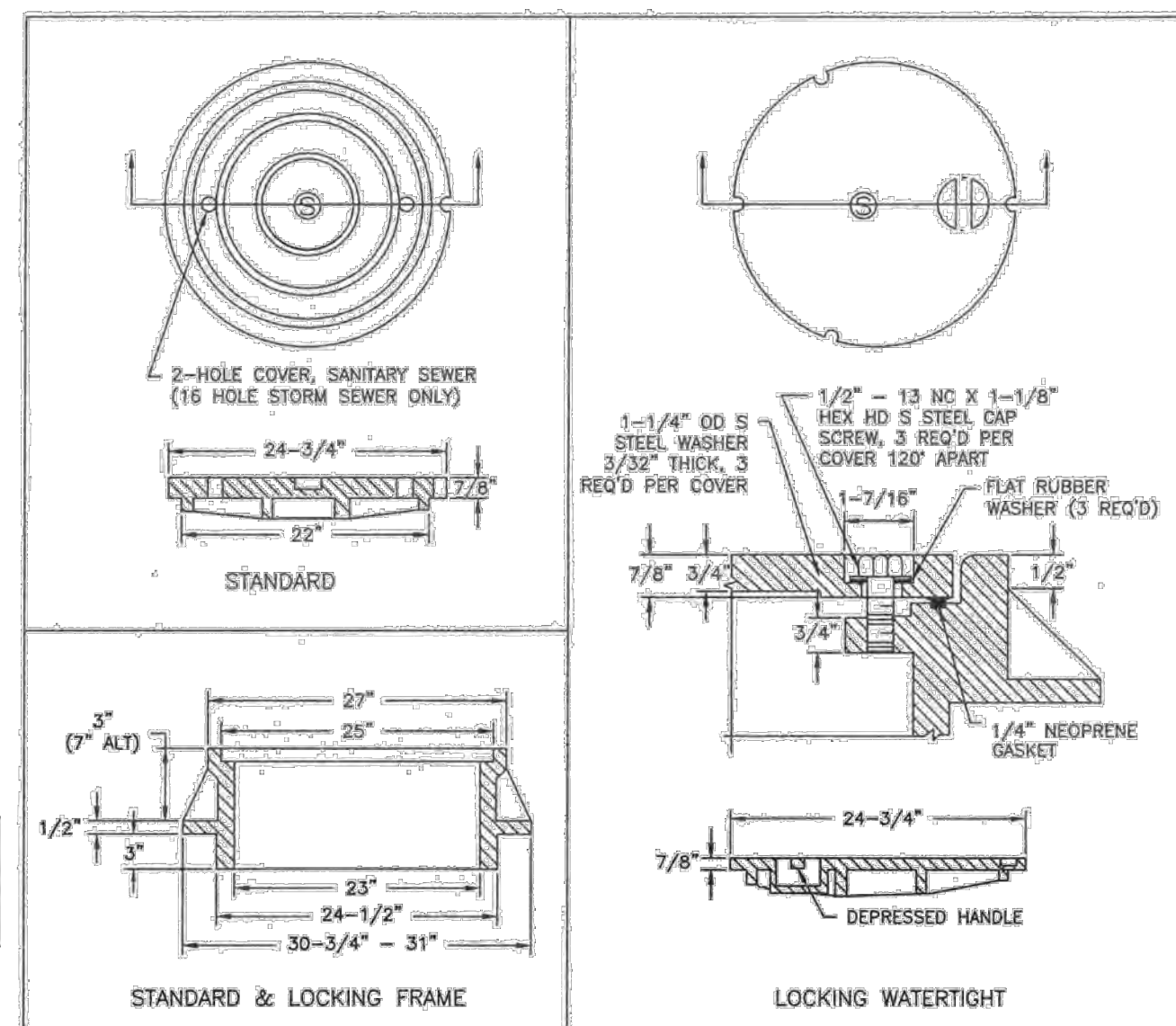
SERVICE LATERAL CONNECTIONS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-04
PUBLIC WORKS DIRECTOR					



- NOTES:
- PIPE SECTIONS MAY BE ENCASED IN CONCRETE WHEN:
 - SEPARATION BETWEEN WATER AND SEWER LINE AT CROSSING IS LESS THAN 18".
 - PIPE WILL BE LAID IN AN AREA WITH POTENTIAL FOR SETTLING SUCH AS IN A RAIL CORRIDOR, CRITICAL AREAS SUCH AS WETLANDS, A ROADWAY OR BELOW A STREAM, OR OTHER AREAS AS REQUIRED BY THE CITY.

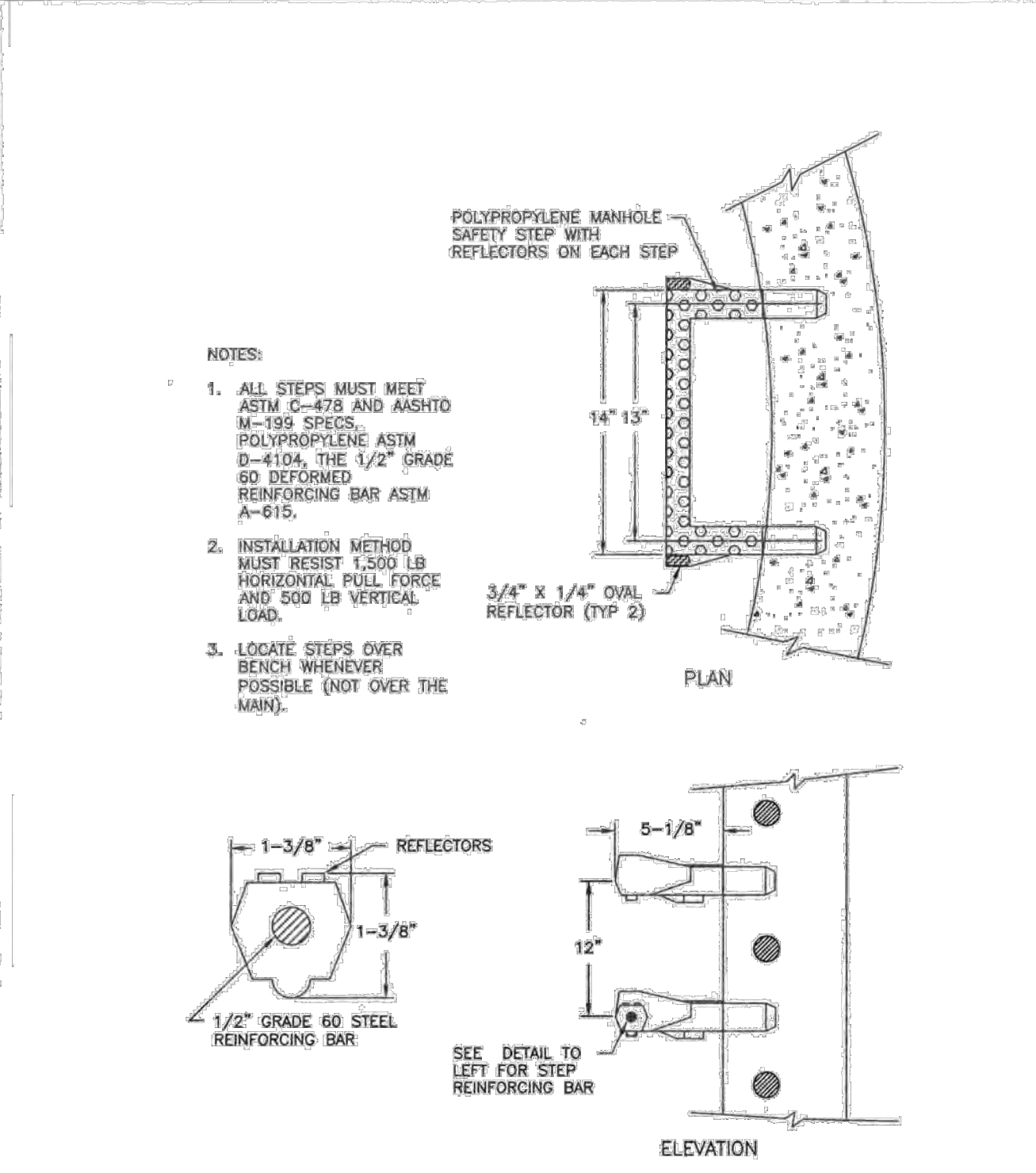


- NOTES:
- ALL PRECAST MANHOLE RINGS AND CONES SHALL CONFORM TO ASTM C-478 WITH CAST IN STEPS. SEE MANHOLE STEP DETAIL S-09.
 - IN OVER EXCAVATED AREAS, PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE 3/4" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT USING HAND TAMPER.
 - BASE CONCRETE SHALL BE 3,000 PSI, 2-4" SLUMP. FLOW LINES AND INSIDE SURFACES SHALL BE TROWELED SMOOTH & UNIFORM AT THE TOP OF POUR. MANHOLE BASE MAY BE MONOLITHICALLY CAST TO 8" ABOVE BARRIL OF MAIN SEWER. CHANNELS SHALL CONFORM ACCURATELY TO SEWER GRADE. INSTALL BENCHES TO ELEVATION OF SPRINGLINE OF PIPE.
 - CAST-IN-PLACE MONOLITHIC MANHOLE MAY BE SUBSTITUTED WITH SPECIFIC APPROVAL OF THE ENGINEER. SEE MANHOLE CONNECTION DETAIL S-10.
 - JOINTS SHALL BE CONSTRUCTED SO AS TO BE WATERTIGHT. SEE TOP SLAB FOR PRECAST MANHOLE DETAIL S-11 AND MANHOLE JOINTS DETAIL S-14.
 - SEAL ALL MANHOLE JOINTS AND FRAME WITH INT-SHIELD "SEAL WRAP" EXTERIOR SEAL SYSTEM OR APPROVED EQUIVALENT.
 - MANHOLES UNDER 6' IN DEPTH FROM RIM TO SHELF SHALL HAVE A TOP SLAB IN LIEU OF CONE. SEE TOP SLAB FOR PRECAST MANHOLE DETAIL S-11.
 - VACUUM TESTING OF MANHOLES WILL BE REQUIRED.
 - LOCKING COVERS ARE REQUIRED IN EASEMENTS OR AT THE DISCRETION OF THE PUBLIC WORKS DIRECTOR.



- NOTES:
- COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL ROUND.
 - MATERIAL SHALL BE OF GRAY CAST IRON, ASTM A-48, CLASS 30.

MANHOLE FRAMES AND COVERS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-08
PUBLIC WORKS DIRECTOR					



- NOTES:
- ALL STEPS MUST MEET ASTM C-478 AND AASHTO M-199 SPECS. POLYPROPYLENE ASTM D-4104, THE 1/2" GRADE 60 DEFORMED REINFORCING BAR ASTM A-615.
 - INSTALLATION METHOD MUST RESIST 1,500 LB HORIZONTAL PULL FORCE AND 500 LB VERTICAL LOAD.
 - LOCATE STEPS OVER BENCH WHENEVER POSSIBLE (NOT OVER THE MAIN).

MANHOLE STEPS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-09
PUBLIC WORKS DIRECTOR					

CONCRETE ENCASED SEWER PIPE					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-06
PUBLIC WORKS DIRECTOR					

PRECAST MANHOLE					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-07
PUBLIC WORKS DIRECTOR					

MANHOLE FRAMES AND COVERS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-08
PUBLIC WORKS DIRECTOR					

MANHOLE STEPS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	S-09
PUBLIC WORKS DIRECTOR					

TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Utility Details

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: 60%
 Date: 11-29-2023

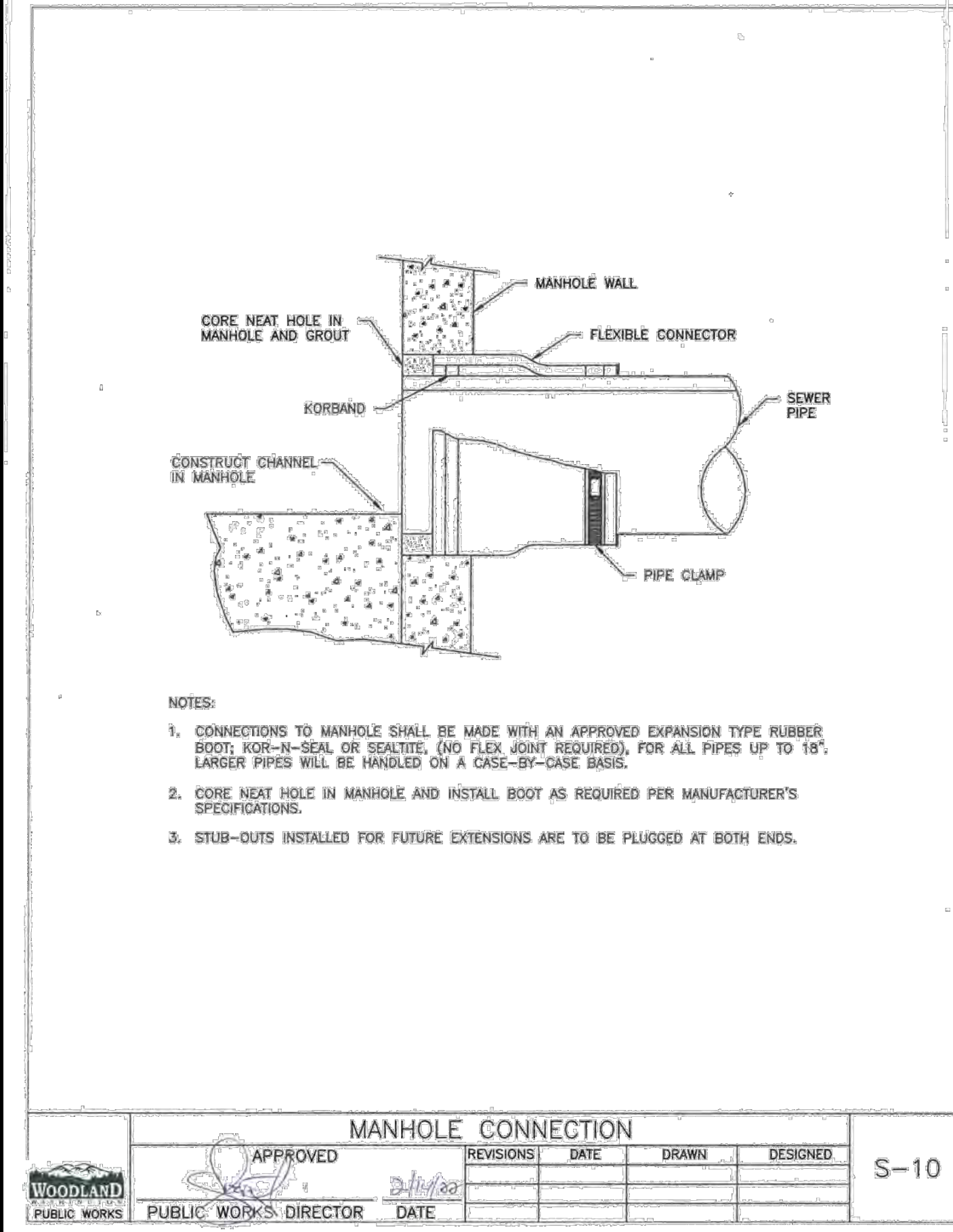
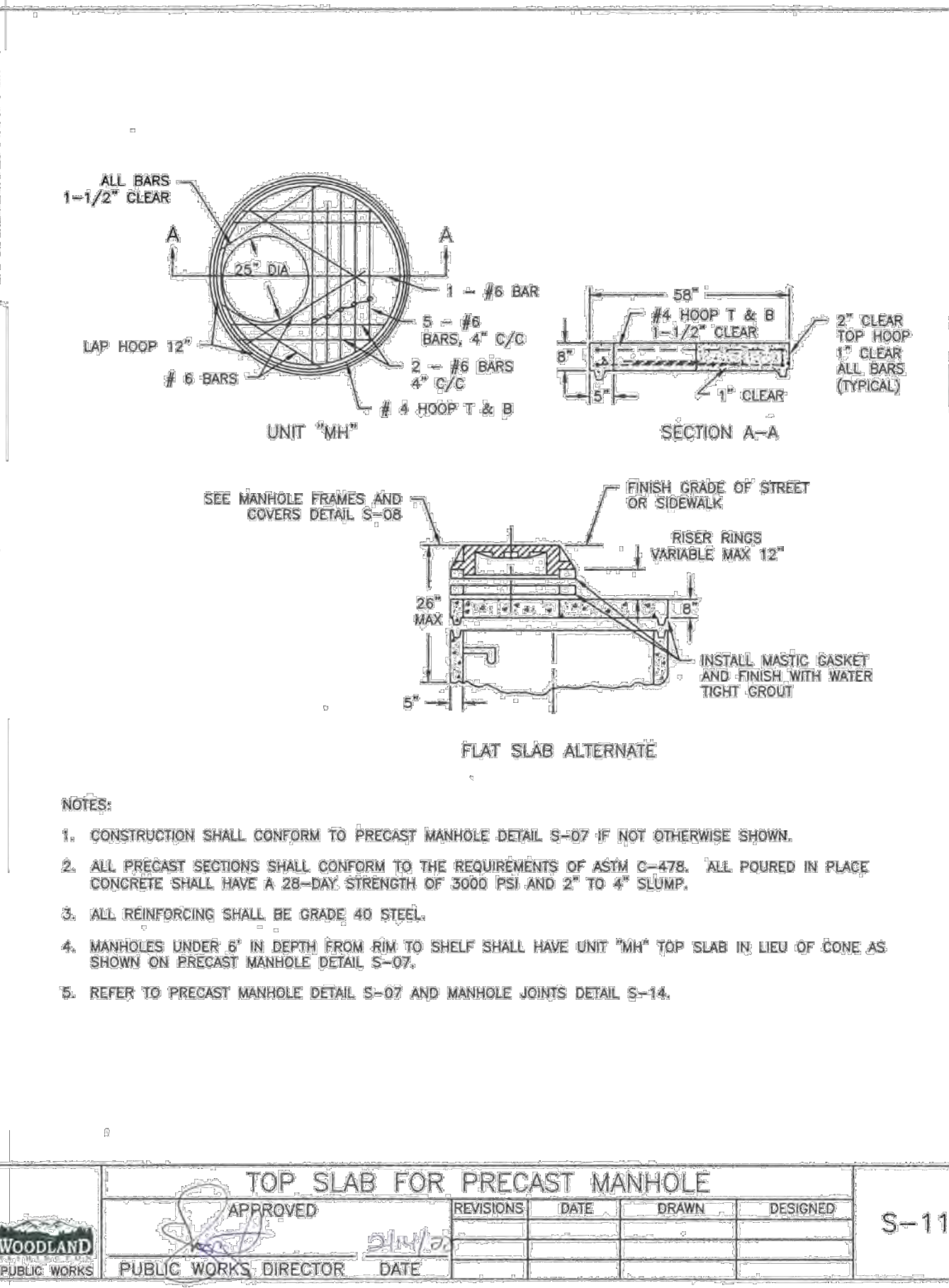
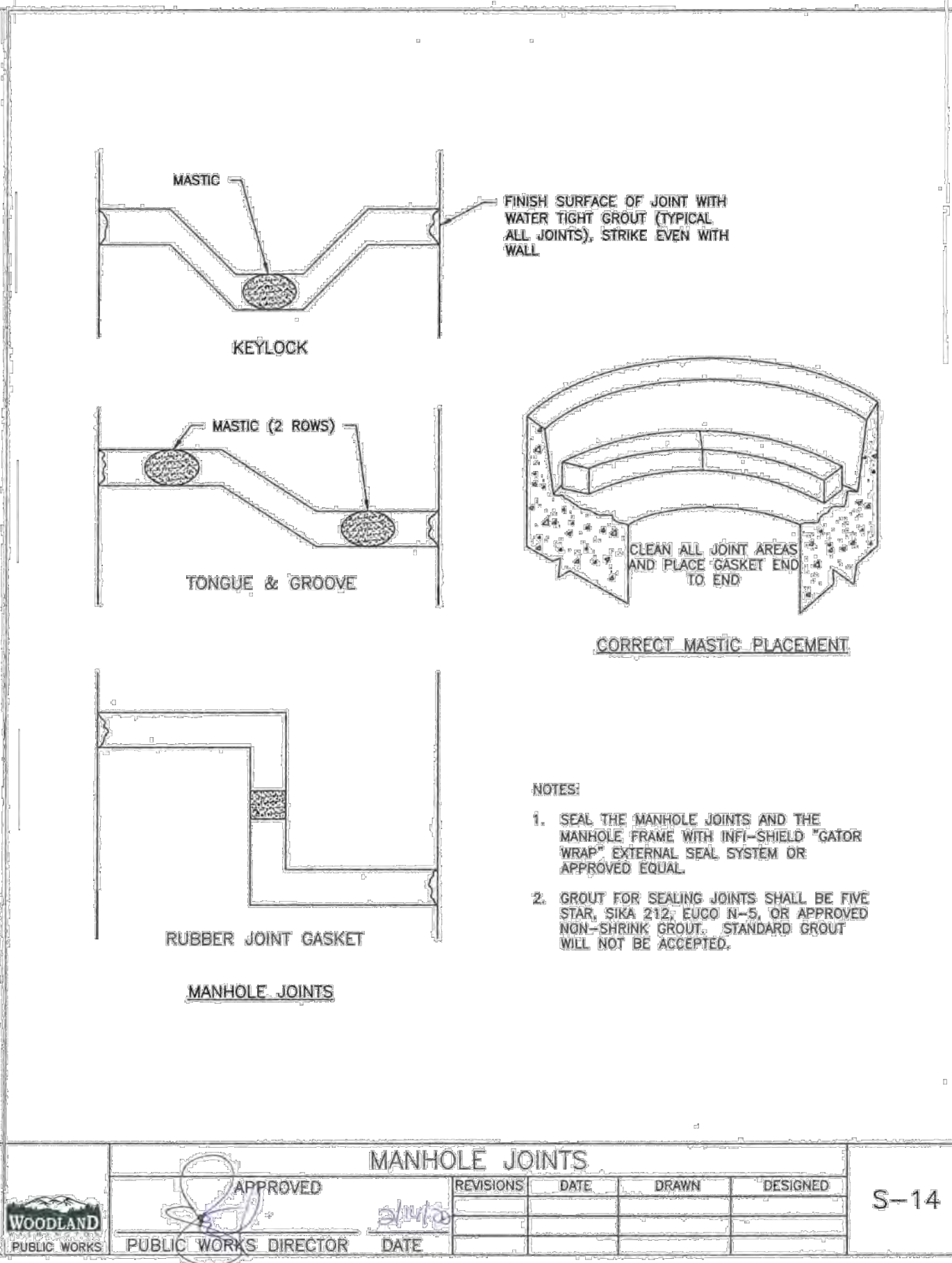
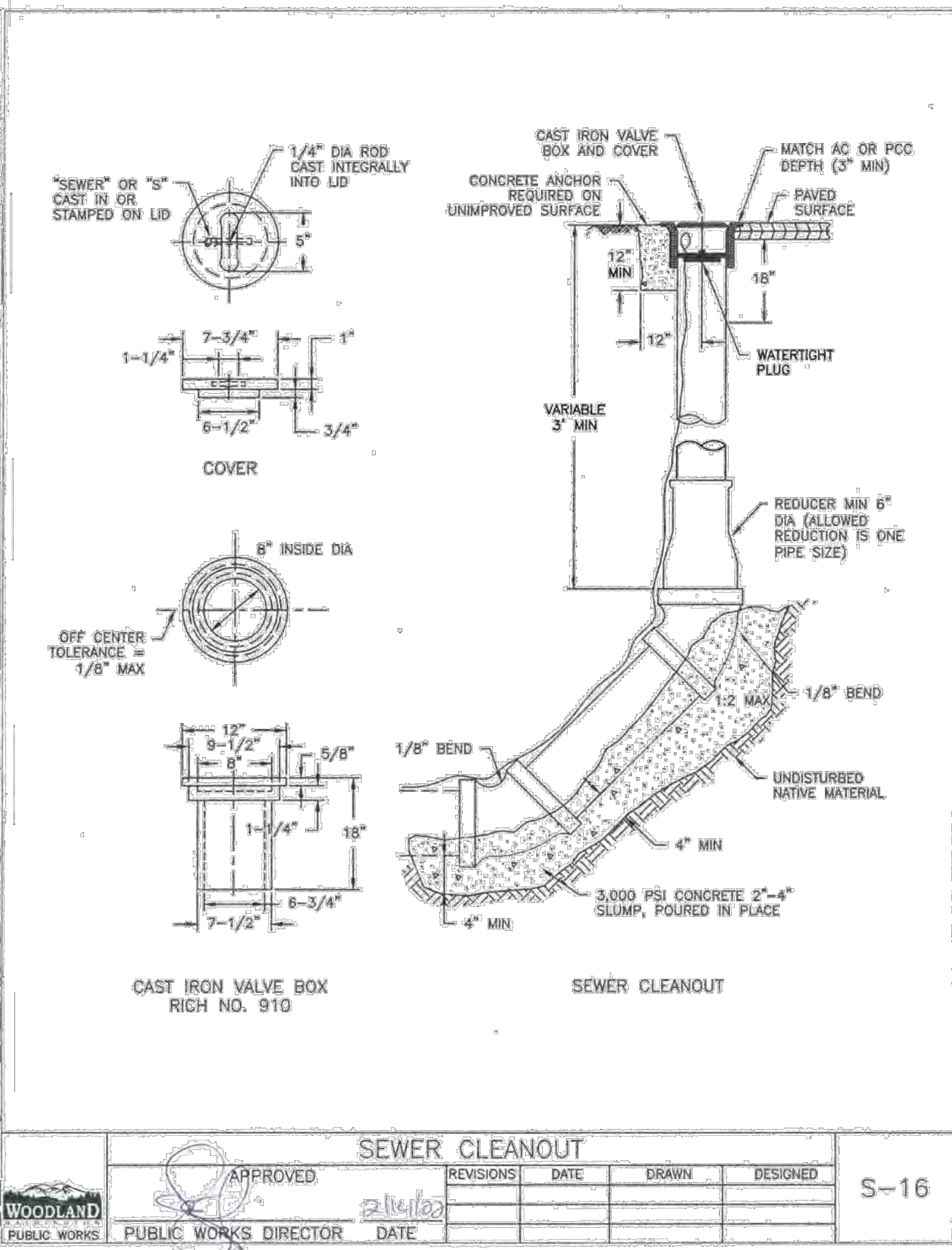
Designed by: KWB
 Checked by: CLR
 Approved by: KWB

Project Number:
0788.0259

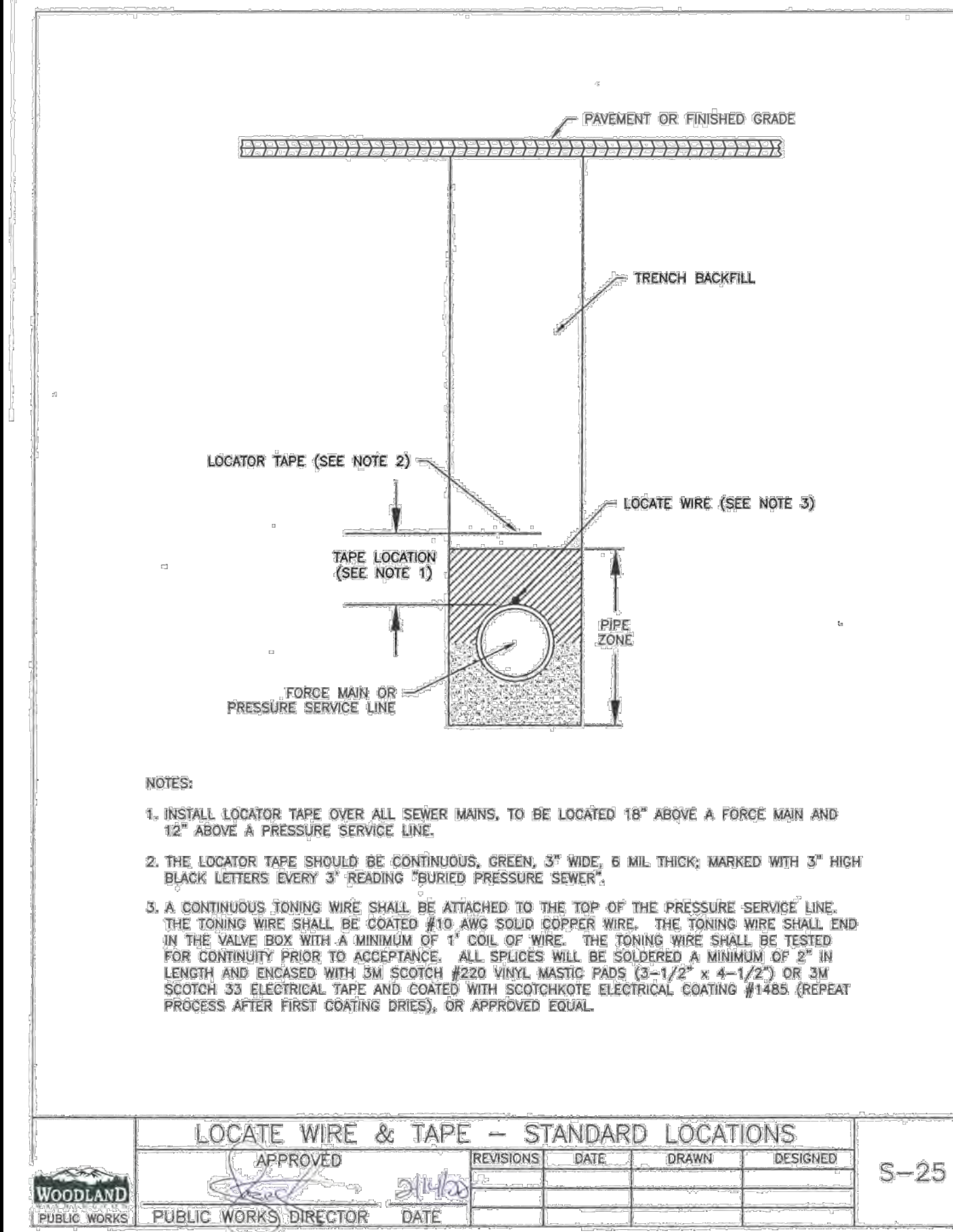
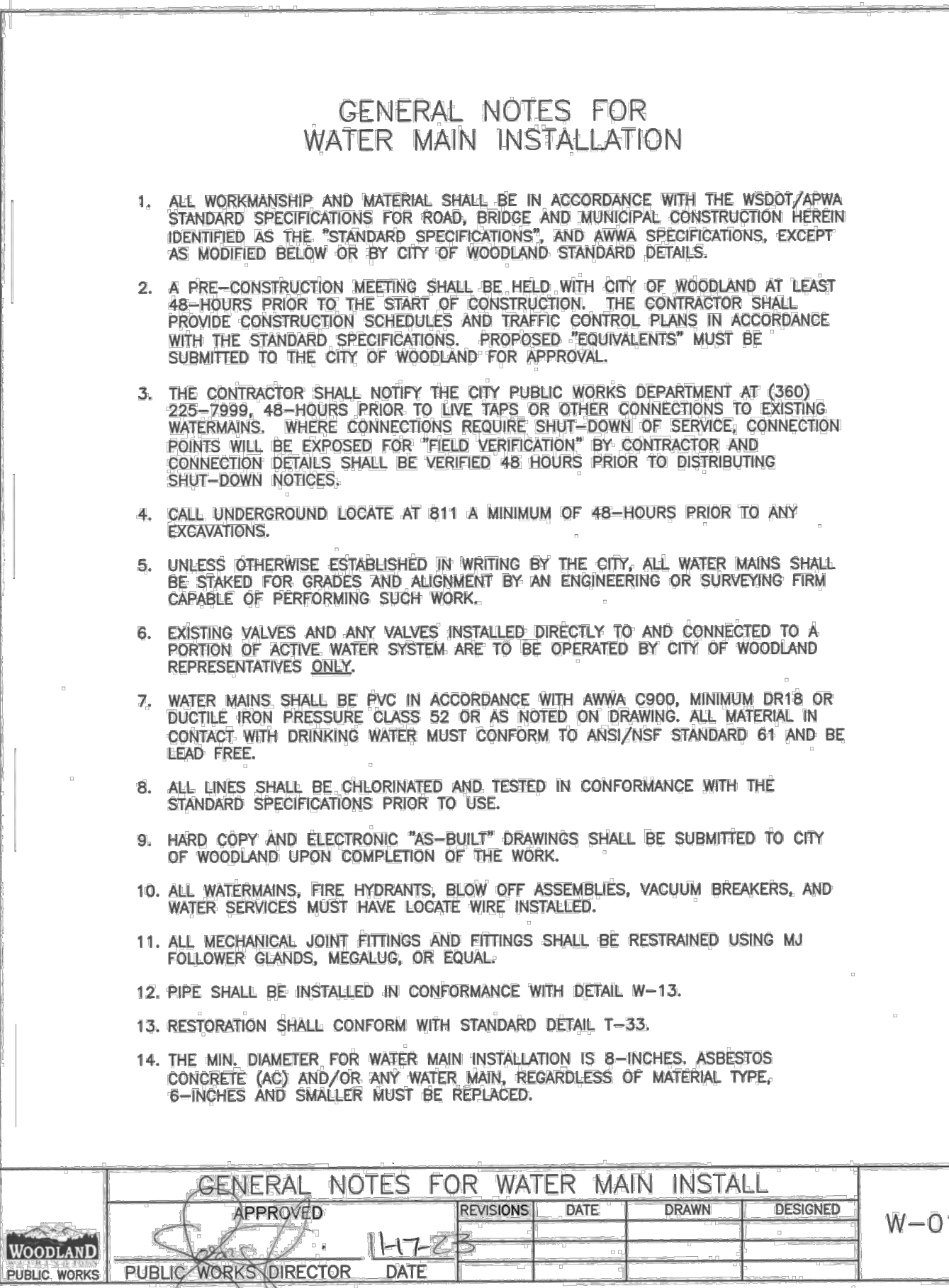
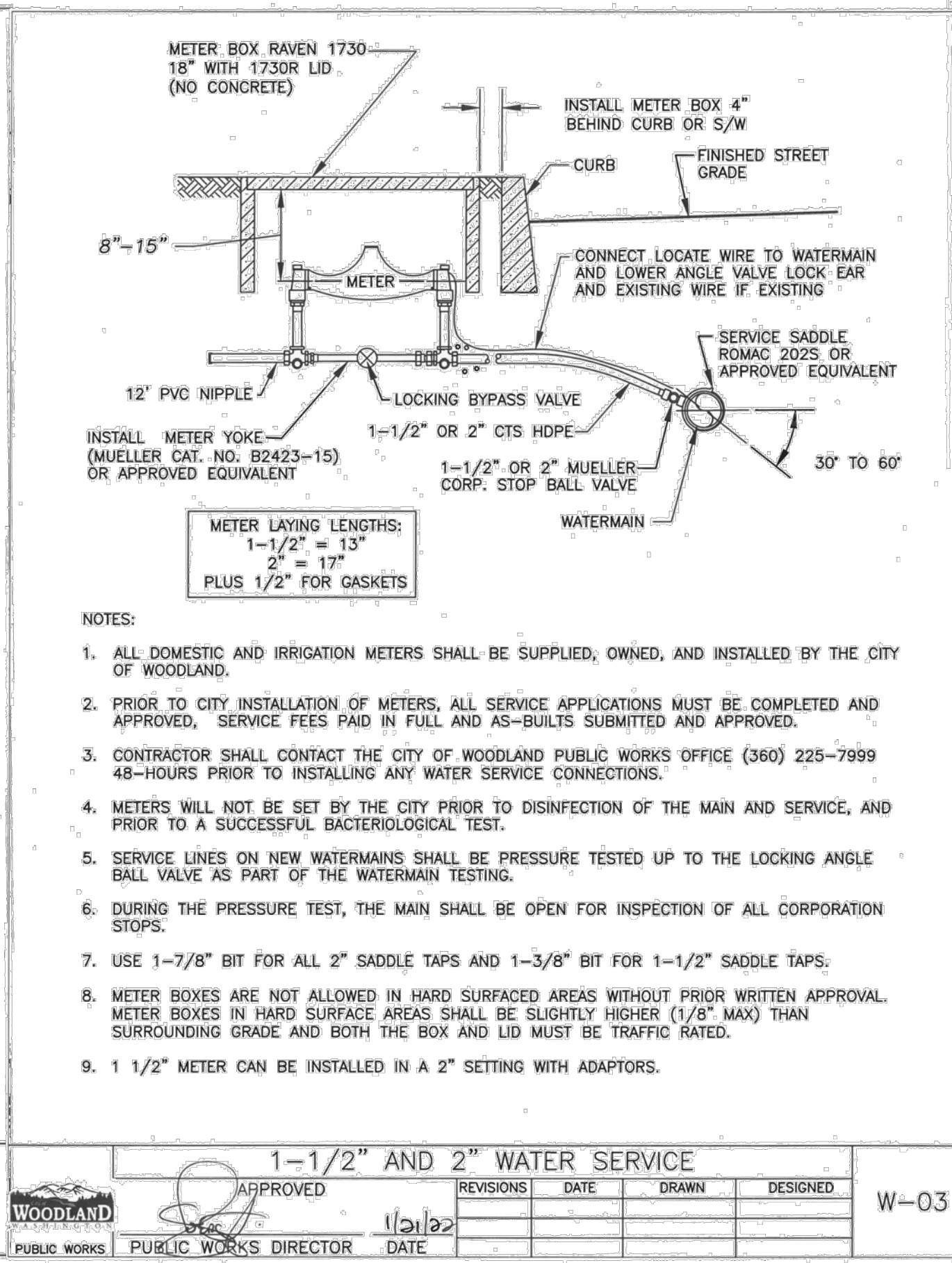
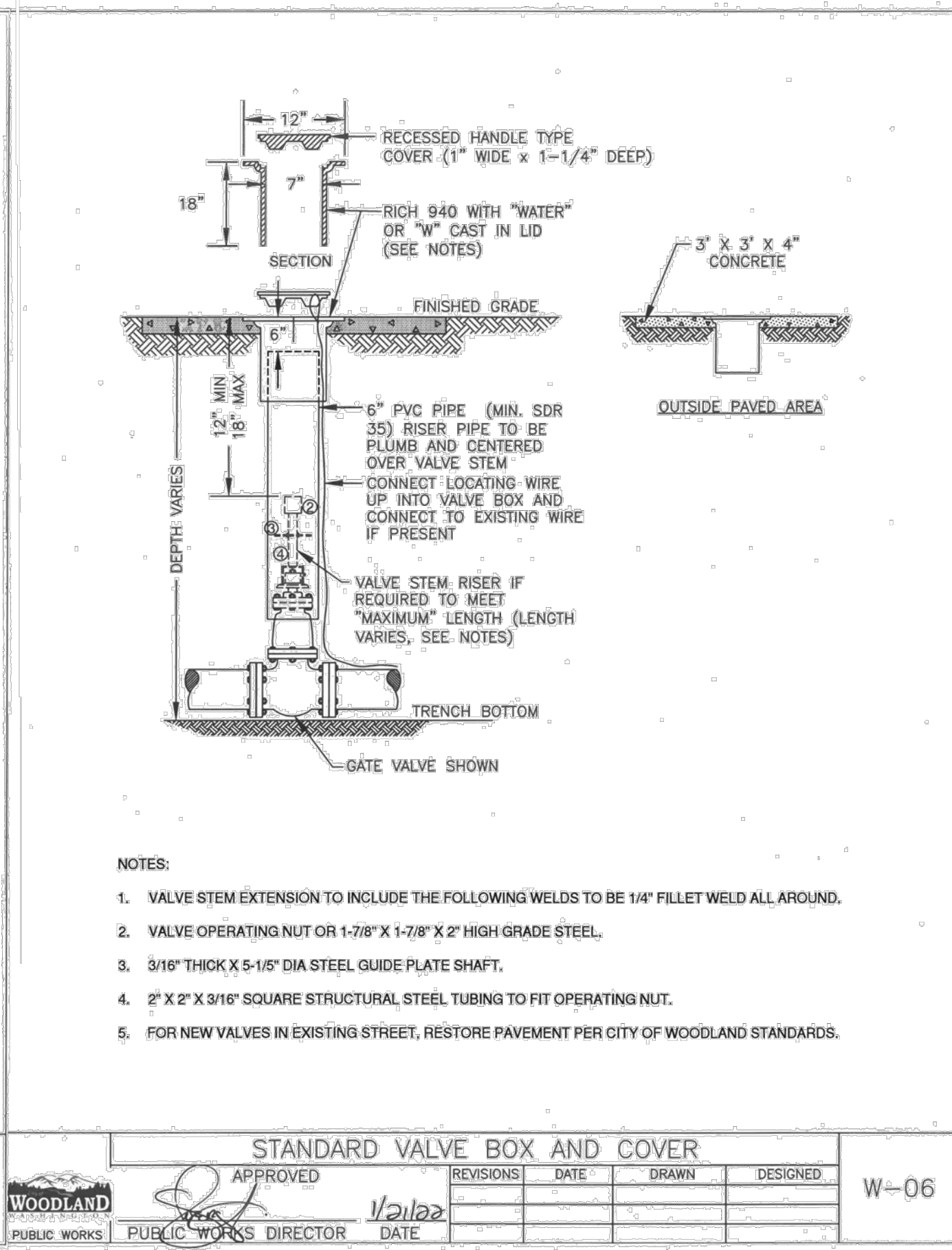
Drawing Number:
C3.1

Sheet Number:
6 of 24

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<table border="1"> <tr><th colspan="5">MANHOLE CONNECTION</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	MANHOLE CONNECTION					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					S-10	<table border="1"> <tr><th colspan="5">TOP SLAB FOR PRECAST MANHOLE</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	TOP SLAB FOR PRECAST MANHOLE					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					S-11	<table border="1"> <tr><th colspan="5">MANHOLE JOINTS</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	MANHOLE JOINTS					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					S-14	<table border="1"> <tr><th colspan="5">SEWER CLEANOUT</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	SEWER CLEANOUT					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					S-16
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<table border="1"> <tr><th colspan="5">LOCATE WIRE & TAPE - STANDARD LOCATIONS</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	LOCATE WIRE & TAPE - STANDARD LOCATIONS					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					S-25	<table border="1"> <tr><th colspan="5">GENERAL NOTES FOR WATER MAIN INSTALL</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	GENERAL NOTES FOR WATER MAIN INSTALL					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					W-01	<table border="1"> <tr><th colspan="5">1-1/2" AND 2" WATER SERVICE</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	1-1/2" AND 2" WATER SERVICE					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					W-03	<table border="1"> <tr><th colspan="5">STANDARD VALVE BOX AND COVER</th></tr> <tr><td>APPROVED</td><td>REVISIONS</td><td>DATE</td><td>DRAWN</td><td>DESIGNED</td></tr> <tr><td><i>[Signature]</i></td><td></td><td></td><td></td><td></td></tr> </table>	STANDARD VALVE BOX AND COVER					APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	<i>[Signature]</i>					W-06
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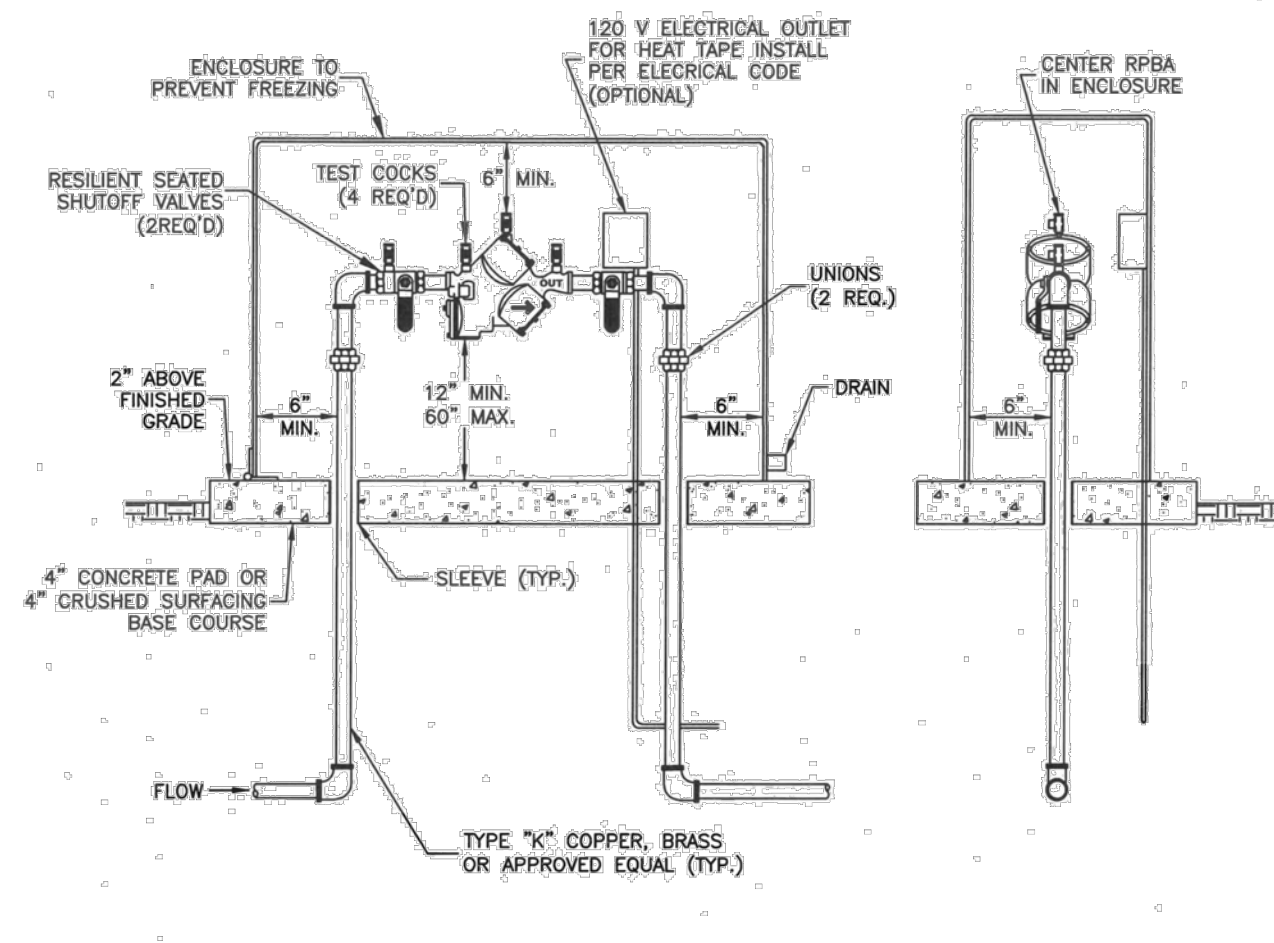
GENERAL NOTES FOR BACKFLOW PROTECTION

- ALL REDUCED PRESSURE AND BACKFLOW DEVICES SHALL BE WASHINGTON STATE APPROVED, PER WAC 246-290.
- FIRE SPRINKLER AND IRRIGATION SYSTEMS SHALL BE PROTECTED WITH STATE APPROVED BACKFLOW PROTECTION AS PER WAC 246-290. IRRIGATION SYSTEMS ARE PROTECTED COMMENSURATE WITH THE DEGREE OF HAZARD AS DEFINED BELOW:
 - HIGH HEALTH HAZARD - IS ASSESSED TO ANY IRRIGATION SYSTEM THAT CONTAINS PUMPS OR INFECTORS FOR THE ADDITION OF CHEMICALS. THIS RISK ASSESSMENT IS ALSO BASED ON THE ADDITIONAL HAZARD POSED BY BACTERIAL CONTAMINANTS FOUND ON LAWNS, AND ON THE POSSIBILITY OF CHANGES BEING MADE TO THE IRRIGATION SYSTEM BY THE CUSTOMER. AN APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY, OR AN APPROVED AIR GAP SEPARATION, SHALL BE REQUIRED IN ALL CASES WHERE MEANS ARE PROVIDED FOR CHEMICALS OR HERBICIDES TO BE INJECTED INTO THE IRRIGATION SYSTEM, OR WHERE AN AUXILIARY SUPPLY IS ALSO PROVIDED FOR IRRIGATION WATER.
 - LOW HEALTH HAZARD - IS ASSESSED TO ALL IRRIGATION SYSTEMS NOT OTHERWISE ASSESSED AS A HIGH HEALTH HAZARD. THIS RISK ASSESSMENT IS BASED ON THE HAZARD POSED BY BACTERIAL AND CHEMICAL CONTAMINANTS FOUND ON LAWNS, AND ON THE POSSIBILITY OF CHANGES BEING MADE TO THE IRRIGATION SYSTEM BY THE CUSTOMER. AN APPROVED DOUBLE CHECK VALVE ASSEMBLY IS REQUIRED.
- ALL COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY FACILITIES SHALL BE PROTECTED WITH WASHINGTON STATE APPROVED BACKFLOW PROTECTION.
- FURTHER BACKFLOW PROTECTION SHALL BE REQUIRED BY THE CITY OF WOODLAND DEPENDENT UPON ACTIVITY (BOILERS, CHILLERS, CHEMICAL ADDITION, BOOSTER PUMPS, WELLS, MEDICAL EQUIP, SODA POP MACHINES, ETC).
- ALL HOSEBIBS SHALL BE PROTECTED WITH VACUUM BREAKERS.
- IF CHEMICALS ARE ADDED TO THE FIRE PROTECTION SYSTEM, A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER IS REQUIRED.
- IF A WELL IS NOW EXISTING ON-SITE OR IS DRILLED IN THE FUTURE, A REDUCED PRESSURE BACKFLOW ASSEMBLY WILL BE REQUIRED AT EACH METER.
- WHERE A VAULT IS REQUIRED, A GALV. STEEL WALL MOUNTED CHAMBER LADDER W/EXTENSIONS IS REQUIRED AND SHALL BE CENTERED UNDER THE ACCESS DOOR.
- DOUBLE CHECK ASSEMBLIES SHALL BE INSTALLED EITHER OUTSIDE ABOVE GROUND OR INSIDE THE BUILDING IN A MAINTAINABLE LOCATION.
- REDUCED PRESSURE ASSEMBLIES SHALL BE INSTALLED EITHER OUTSIDE ABOVE GROUND OR INSIDE THE BUILDING.
- ALL BACKFLOW DEVICES SHALL BE PROTECTED FROM FREEZING.
- BACKFLOW PREVENTION ASSEMBLY VAULTS (L.E. FIRE AND SERVICE PROTECTION) MUST BE INSTALLED AT THE CUSTOMER'S SIDE OF THE EASEMENT OR PROPERTY LINE. ALTERNATE LOCATIONS MUST BE REQUESTED IN WRITING AND APPROVED BY CITY OF WOODLAND PUBLIC WORKS PRIOR TO INSTALLATION.
- NO PART OF THE BACKFLOW PREVENTION ASSEMBLY SHALL BE SUBMERGED IN WATER OR INSTALLED IN A LOCATION SUBJECT TO FLOODING. IF A BACKFLOW PREVENTION ASSEMBLY IS INSTALLED IN A VAULT OR BASEMENT, ADEQUATE DRAINAGE OR DEWATERING SHALL BE PROVIDED.
- ALL FIRE PROTECTION SERVICES SHALL HAVE AN IRON BODY GATE VALVE AT THE PUBLIC MAIN AND SHALL BE PRIVATE AFTER THAT VALVE.
- ALL DOMESTIC SERVICES WITH BACKFLOW PROTECTION SHALL BE PRIVATE AFTER THE DOMESTIC WATER METER.
- ALL BACKFLOW PREVENTION DEVICES SHALL BE TESTED AFTER INSTALLATION PRIOR TO ACCEPTANCE AND ANNUALLY THEREAFTER BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. A PARTIAL LIST OF WASHINGTON STATE APPROVED TESTERS IS AVAILABLE UPON REQUEST. TEST RESULTS SHALL BE SENT TO THE CITY OF WOODLAND PUBLIC WORKS DEPARTMENT.

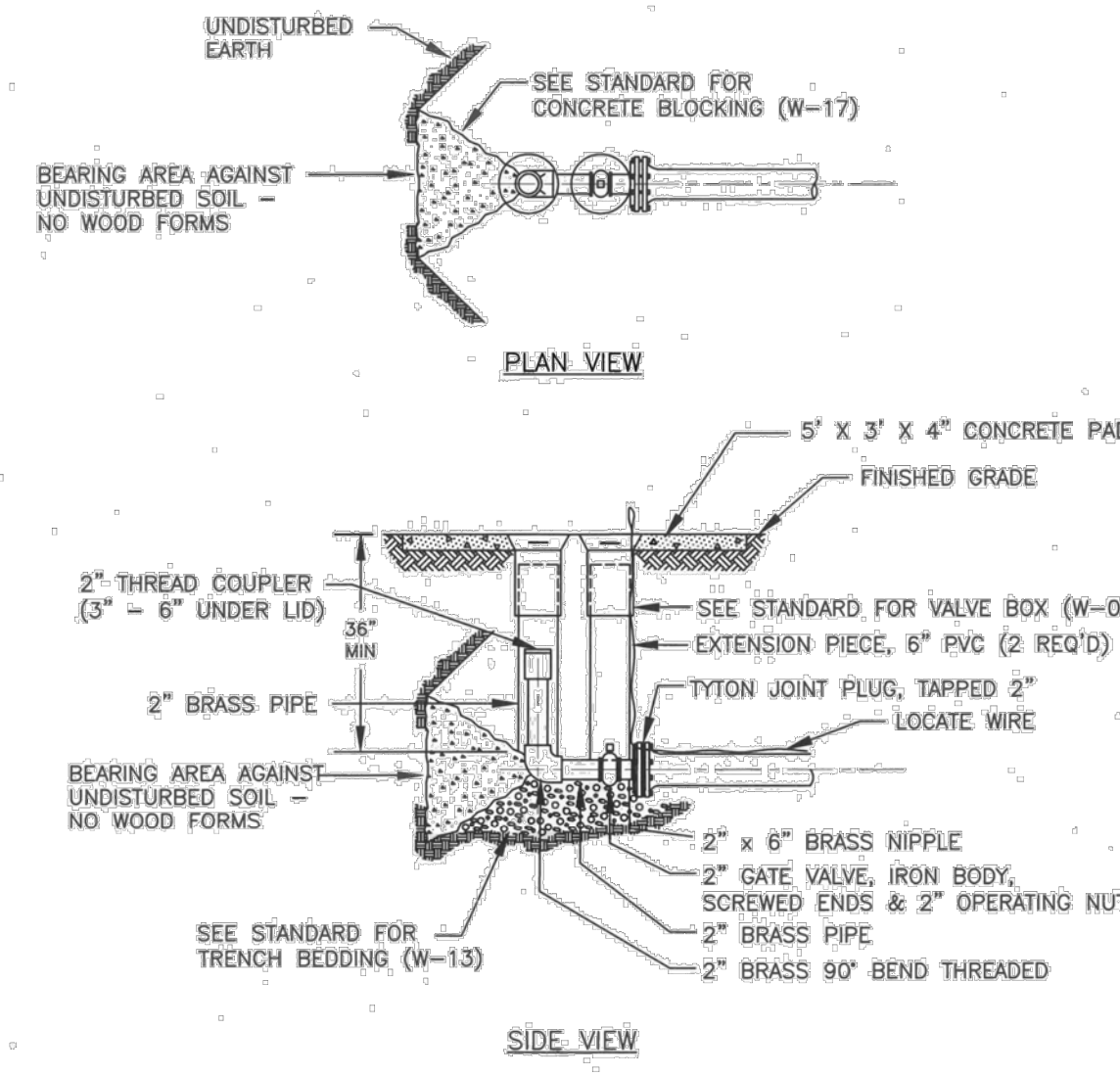
MAIL TEST RESULTS TO: CITY OF WOODLAND
 PUBLIC WORKS
 P.O. BOX 9
 WOODLAND, WA 98674

EMAIL TEST RESULTS TO: PWCLEK@CI.WOODLAND.WA.US

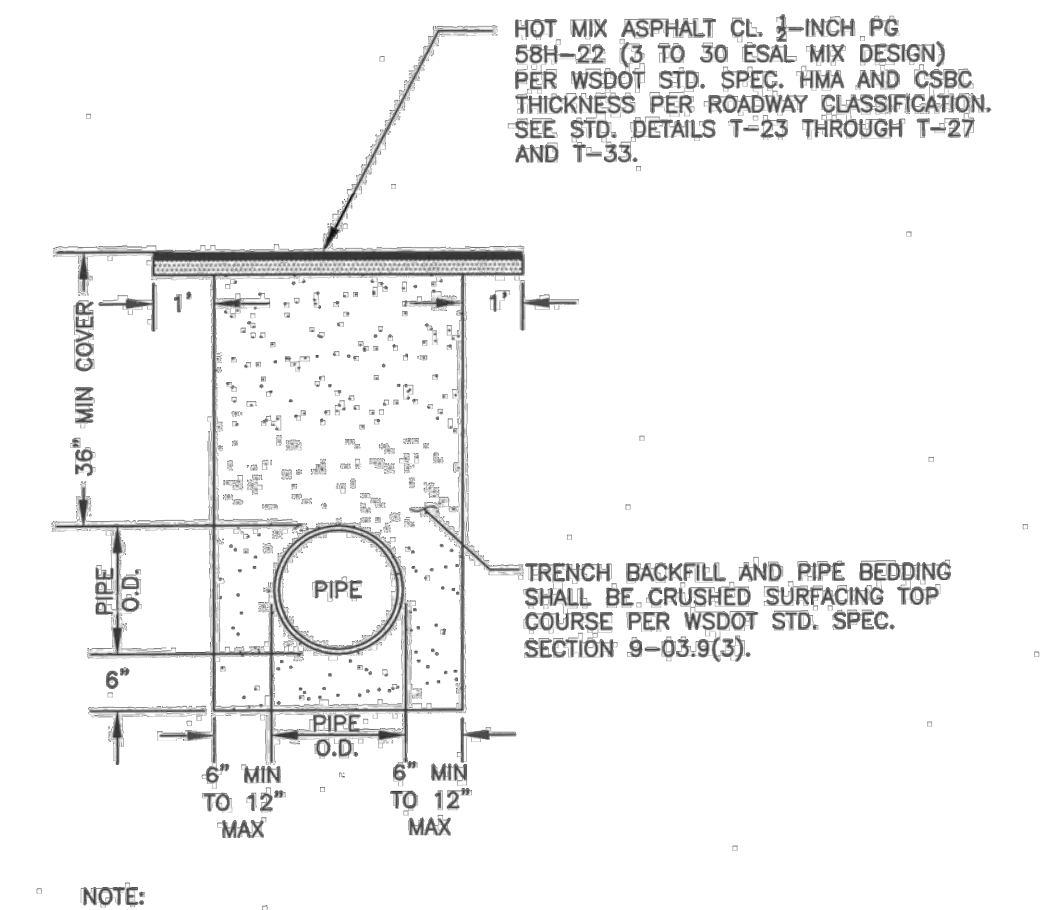
FAX TEST RESULTS TO: 360-225-7356



- NOTES:**
- REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE APPROVED BY THE STATE OF WASHINGTON. APPROVED RPBA TO BE INSTALLED IN THE ORIENTATION (VERTICAL OR HORIZONTAL) FOR WHICH THEY ARE APPROVED.
 - THE WATER LINE SHALL BE DISINFECTED, FLUSHED AND PRESSURE TESTED PRIOR TO INSTALLATION OF THE BACKFLOW ASSEMBLY.
 - DESIGN FOR BACK SIPHONAGE AND BACK PRESSURE.
 - ALL INSTALLATIONS SHALL HAVE TWO UNIONS.
 - ABOVE GROUND INSTALLATION ONLY.
 - DO NOT INSTALL IN A PIT, TRENCH OR AREA SUBJECT TO FLOODING.
 - RPBA MUST BE ACCESSIBLE AND PROTECTED FROM FREEZING.
 - DRAIN SHALL BE SIZED PER THE AWWA CROSS CONNECTION MANUAL.
 - A PLUMBING PERMIT IS REQUIRED, CONTACT THE WOODLAND BUILDING DEPARTMENT AT (360) 225-7299.
 - RPBA MUST BE TESTED AFTER INSTALLATION, THEN ANNUALLY BY A WASHINGTON STATE CERTIFIED BACKFLOW TESTER. RPBA SHALL BE RETESTED IF MOVED OR REPAIRED. TEST RESULTS SHALL BE SENT TO THE CITY OF WOODLAND PUBLIC WORKS DEPARTMENT.



- NOTE:**
- NO WOOD OR TIE DOWNS ALLOWED.



- NOTE:**
- PIPE BEDDING AND TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM. D1557, IN 6-INCH MAXIMUM LIFTS.
 - MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE PER THE MOST CURRENT WSDOT STD. SPECIFICATIONS, AS AMENDED BY CITY STANDARDS.
 - SEE CITY STD. DETAIL T-33 FOR STD. TRENCH RESTORATION.

GENERAL NOTES FOR BACKFLOW PROTECTION

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>[Signature]</i>				

REDUCED PRESSURE BACKFLOW ASSEMBLY 2" & SMALLER

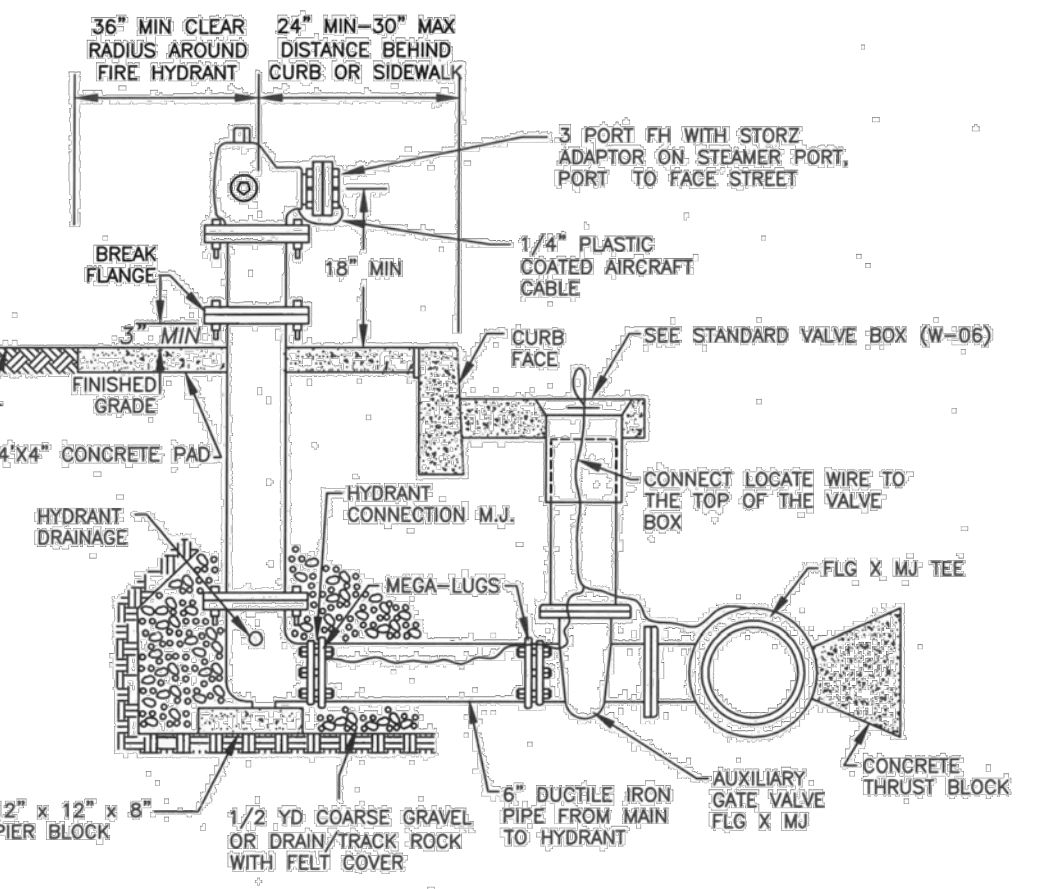
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STANDARD BLOW OFF

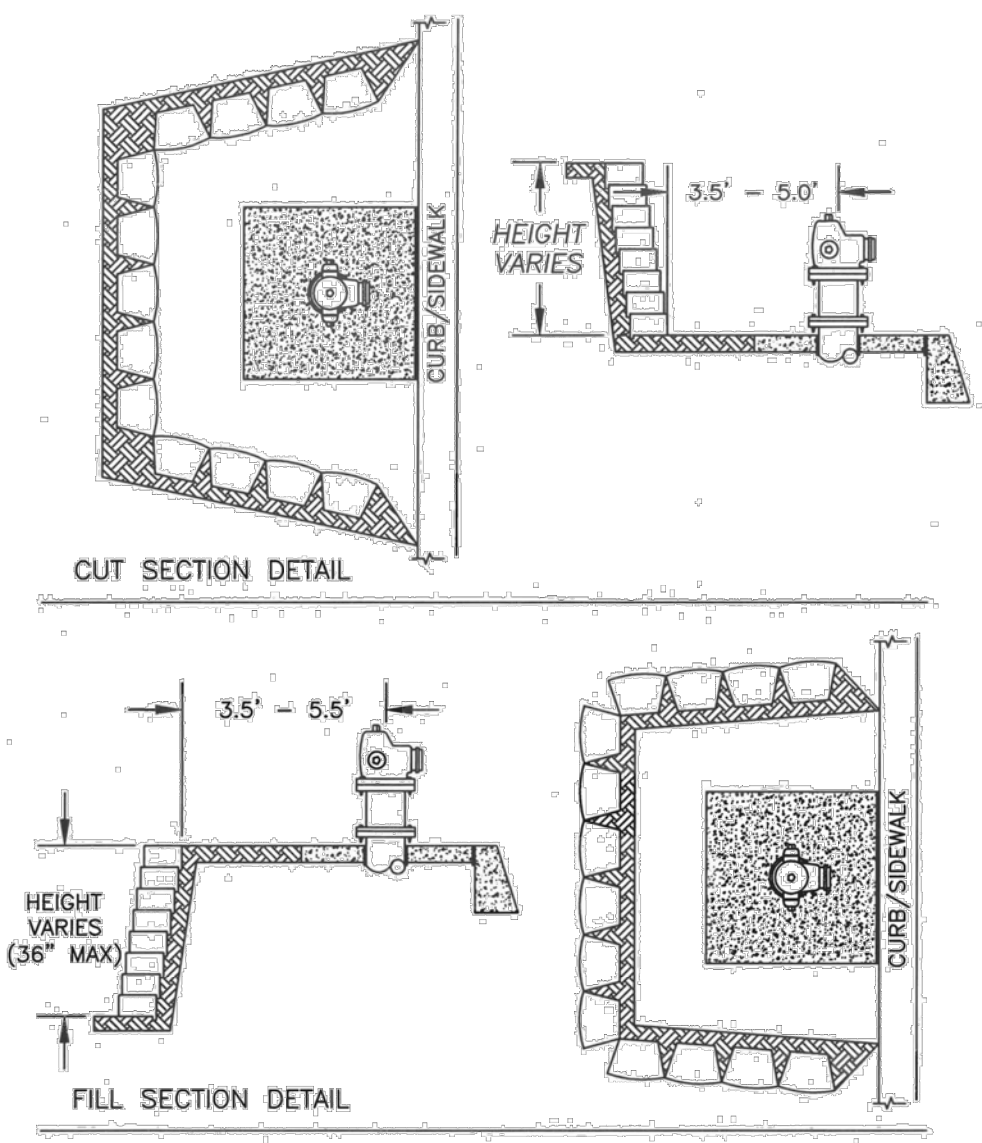
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WATER PIPE TRENCH BEDDING & BACKFILL

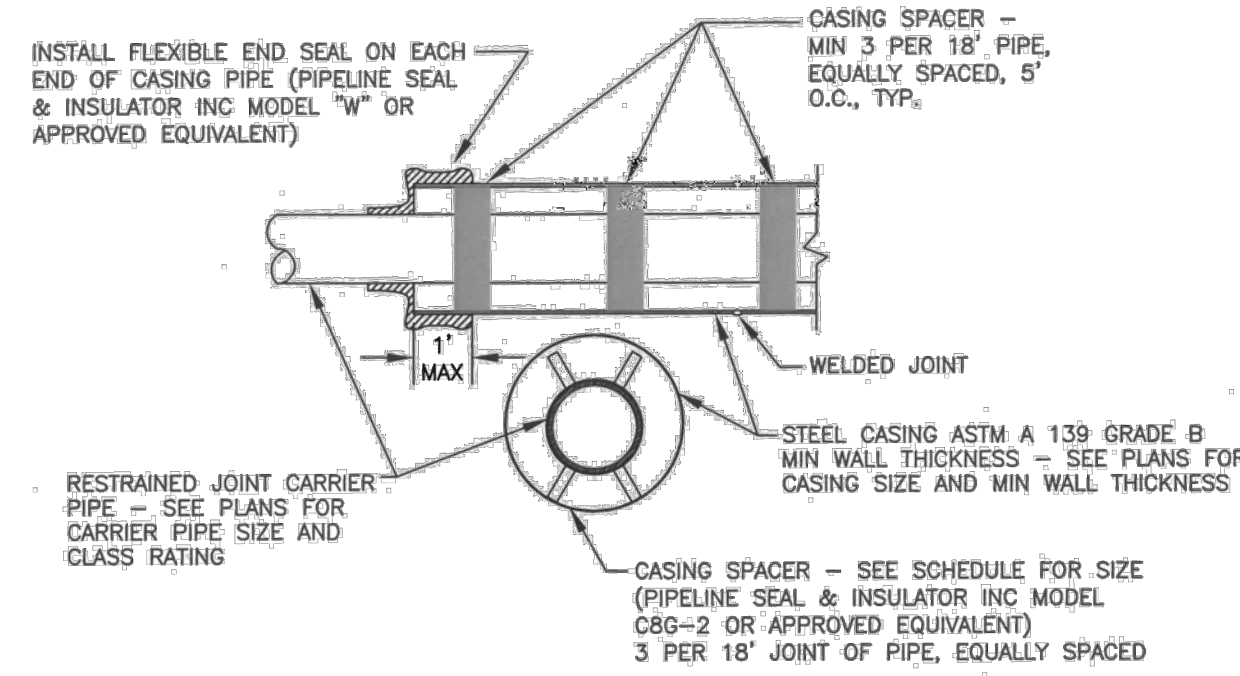
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- NOTES:**
- IN GENERAL, FIRE HYDRANT LOCATIONS SHALL BE AS SHOWN ON THE PLANS AND SHALL CONFORM TO THIS DETAIL. FIRE HYDRANTS SHALL NOT BE SET UNTIL LOCATION AND DEPTH ARE APPROVED BY THE CITY OF WOODLAND PUBLIC WORKS DEPARTMENT.
 - FIRE HYDRANT INSTALLATION SHALL BE APPROVED BY THE CITY OF WOODLAND PUBLIC WORKS DEPARTMENT PRIOR TO BACKFILLING.
 - HYDRANT TO BE WATEROUS WB87 CLASS 250.
 - HYDRANT TO BE 5-1/4" COMMERCIAL W/ (2) 2-1/2" NST, (1) 4-1/2" NST THREADED PORT(S) WITH (1) 5" TWO LUG QUARTER TURN STORZ OR APPROVED EQUAL PUMPER PORT CONNECTION.
 - THE FIRE HYDRANT SHALL BE INSTALLED SO THAT IT IS PLUMB IN ALL DIRECTIONS.
 - FOUR (4) GUARD POSTS TO BE INSTALLED IN UNPROTECTED AREAS (4' RADIUS).
 - FIRE HYDRANTS SHALL BE FACTORY PAINTED OR QUALITY FIELD PAINTED WITH RODDIA SILICONE ALKYD ENAMEL HEAVY DUTY GLOSS SAFETY YELLOW 7-32816-1 TO NEW CONDITION.
 - HYDRANT STANDARD BURY IS 4' UNLESS OTHERWISE NOTED ON THE PLANS, OR WHEN BREAKAWAY JOINT IS INSTALLED 7" ABOVE FINISHED GRADE.
 - ALL JOINTS SHALL BE RESTRAINED UTILIZING MECHANICAL RESTRAIN SYSTEMS. CONCRETE THRUST BLOCKS SHALL NOT BE ALLOWED.
 - STORZ ADAPTORS ARE REQUIRED.
 - INSTALL LOCATING WIRE AND CONNECT TO EXISTING WIRE IF PRESENT.



- NOTES:**
- CONSULT I.B.C. FOR RETAINING WALL CONSTRUCTION REQUIREMENTS.
 - THE AREA WITHIN THE RETAINING WALL BOUNDARIES FROM THE CURB/SIDEWALK TO THE REAR RETAINING WALL SHALL HAVE A MAXIMUM SLOPE OF 1% IN ANY DIRECTION.
 - THE 4"x4" CONCRETE PAD SHALL HAVE A MAXIMUM SLOPE OF 1%.
 - RETAINING WALL SHALL MAINTAIN A MINIMUM RADIUS OF 3.5' AROUND THE HYDRANT.



CASING SIZING REQUIREMENTS

CARRIER PIPE	MINIMUM CASING REQUIREMENTS	WALL THICKNESS
4"	16" A36 STEEL	3/8"
6"	16" A36 STEEL	3/8"
8"	24" A36 STEEL	3/8"
10"	24" A36 STEEL	3/8"
12"	24" A36 STEEL	3/8"
16"	36" A36 STEEL	5/8"
24"	48" A36 STEEL	5/8"

- NOTES:**
- CASING TO BE EXTENDED 5' BEYOND ANY CURBS, WALLS, STRUCTURES, OR FOOTINGS.
 - PUBLIC AND PRIVATE MAINS SHALL BE PLACED IN SEPARATE CASINGS.
 - FOR CASINGS UNDER RAILROAD TRACKS, WRITTEN PERMISSION FOR THE OWNER OF THE RAILROAD TRACKS IS REQUIRED PRIOR TO OBTAINING CITY OF WOODLAND PERMITS TO PROCEED.
 - NO PRIVATE UTILITIES SHALL BE ALLOWED IN CITY OF WOODLAND CASINGS.

SOIL BEARING = 2000 LB/S.F.

PIPE SIZE	HORIZ. BENDS	MIN. BEARING AREA S.F.	MIN. VOL. OF BLOCKING C.F.	MIN. LENGTH OF BLOCKING
4"	TEE	2.3	0.8	0.86
	90°	3.2	1.4	1.25
	45°	1.7	0.5	0.73
	22-1/2°	0.9	0.6	0.46
	11-1/4°	-	-	-
6"	TEE	4.7	2.4	1.24
	90°	6.2	4.0	1.53
	45°	3.6	1.6	1.05
	22-1/2°	1.9	0.6	0.66
	11-1/4°	0.9	0.2	0.39
8"	TEE	8.0	5.4	1.53
	90°	11.4	9.0	2.00
	45°	6.2	3.6	1.37
	22-1/2°	3.3	1.3	0.87
	11-1/4°	1.8	0.5	0.51
10"	TEE	12.1	9.9	2.30
	90°	17.1	16.7	2.46
	45°	9.2	6.4	1.99
	22-1/2°	4.7	2.4	1.08
	11-1/4°	2.4	0.9	0.63
12"	TEE	17.1	13.7	2.37
	90°	24.2	28.0	2.83
	45°	13.1	11.2	2.01
	22-1/2°	6.7	4.1	1.28
	11-1/4°	3.4	1.5	0.74
16"	TEE	23.8	27.3	3.05
	90°	33.8	46.0	3.37
	45°	18.2	18.3	2.39
	22-1/2°	9.3	6.7	1.42
	11-1/4°	4.7	2.4	0.80
24"	TEE	29.9	35.5	3.95
	90°	42.2	64.7	3.79
	45°	22.9	25.8	2.57
	22-1/2°	11.7	9.4	1.80
	11-1/4°	5.9	3.3	0.90

- NOTES:**
- ALL BLOCKING SHALL BE POURED AGAINST FIRM UNDISTURBED SOIL.
 - ALL CONCRETE BLOCKING SHALL BE POURED IN PLACE WITHOUT DIRECT CONTACT TO PIPE, FITTINGS OR FLANGES. 15 LB. ASPHALT- IMPREGNATED FELT, OR EQUIVALENT AS APPROVED BY THE INSPECTOR, SHALL BE PLACED BETWEEN THE CONCRETE AND PIPE, FITTINGS OR FLANGES.
 - LAYOUT TO BE APPROVED BY THE INSPECTOR PRIOR TO AND AFTER CONCRETE POUR.
 - CONCRETE FOR ALL BLOCKING SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 2,300 P.S.I.
 - THIS CHART IS NOT APPLICABLE TO VERTICAL BENDS. LOCATION SPECIFIC DESIGN IS REQUIRED FOR SUCH INSTALLATIONS.
 - WHERE THE TRENCH SOIL HAS A BEARING PRESSURE LESS THAN 2000 POUNDS PER SQUARE FOOT, LOCATION SPECIFIC DESIGN IS REQUIRED.

FIRE HYDRANT

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>[Signature]</i>				

HYDRANT RETAINING WALL DETAIL

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>[Signature]</i>				

PIPE CASING DETAIL

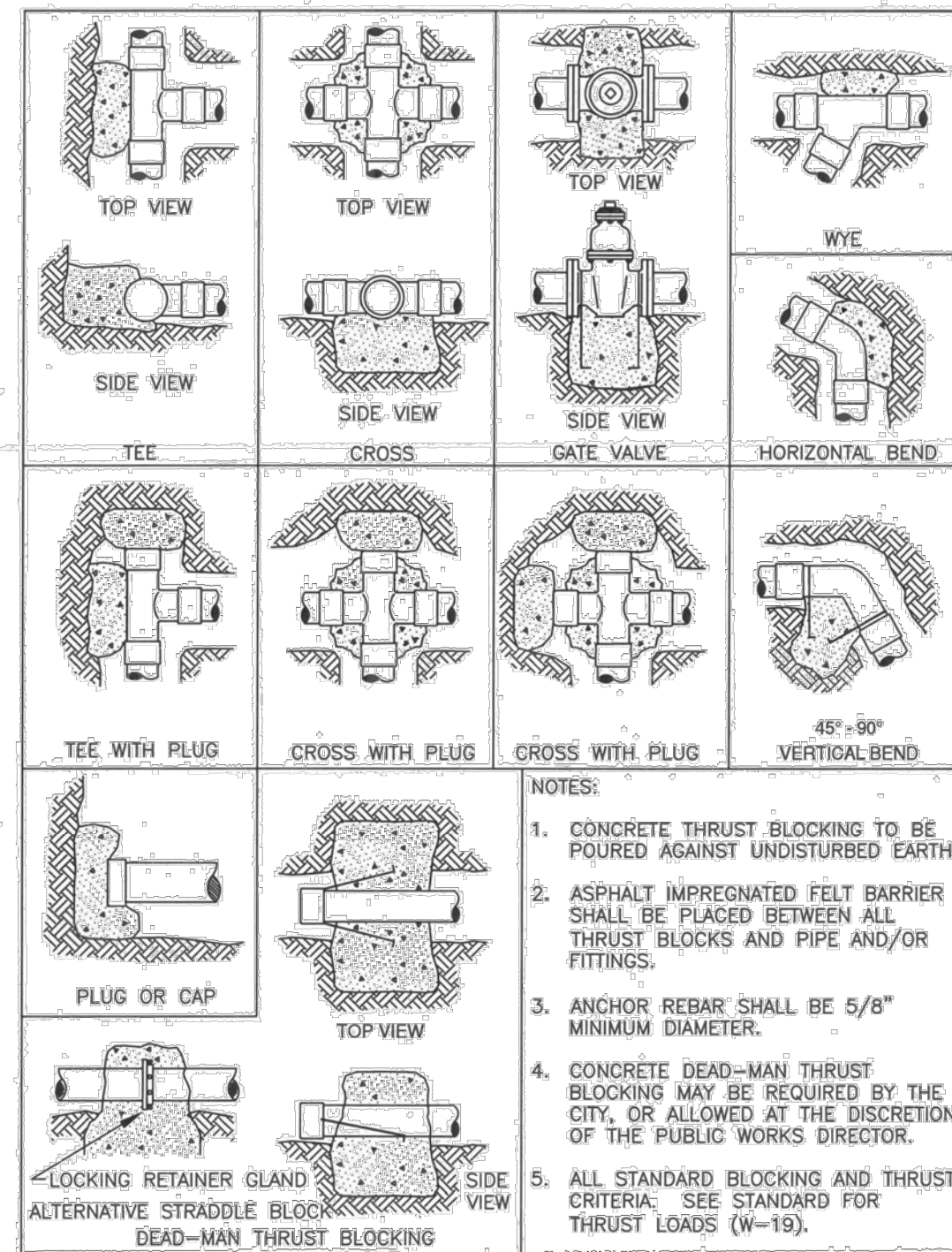
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<i>[Signature]</i>				

STANDARD THRUST BLOCK

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>[Signature]</i>				

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THRUST LOADS

THRUST AT FITTINGS IN POUNDS AT 200 POUNDS PER SQUARE INCH OF WATER PRESSURE

PIPE DIAMETER	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END OR TEE
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300

- NOTES:
- BLOCKING SHALL BE COMMERCIAL CONCRETE POURED IN PLACE AGAINST UNDISTURBED EARTH. FITTING SHALL BE ISOLATED FROM CONCRETE THRUST BLOCK WITH ASPHALT IMPREGNATED FELT OR SIMILAR MATERIAL.
 - TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (S.F.): EXAMPLE: 12" - 90° BEND IN SAND AND GRAVEL 32,000 LBS / 3000 LB/S.F. = 10.7 S.F. OF AREA
 - AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZE, PRESSURES AND SOIL CONDITIONS.
 - BLOCKING SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

SAFE SOIL BEARING LOADS

FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET

SOIL	POUNDS PER SQUARE FOOT
MUCK, PEAT	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

THRUST BLOCKING

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 W-18

THRUST LOADS

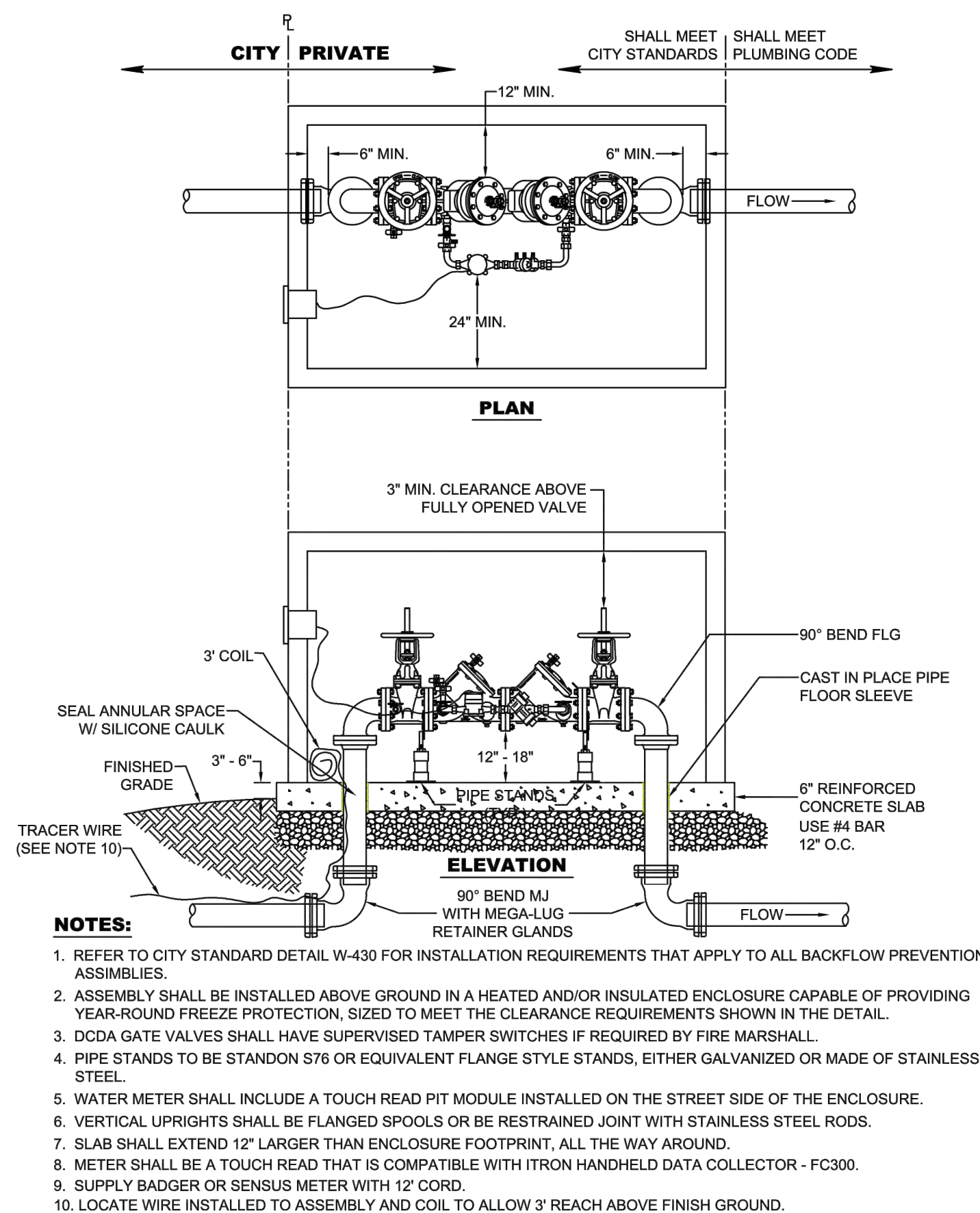
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 W-19

WATER AND SEWER SPACING

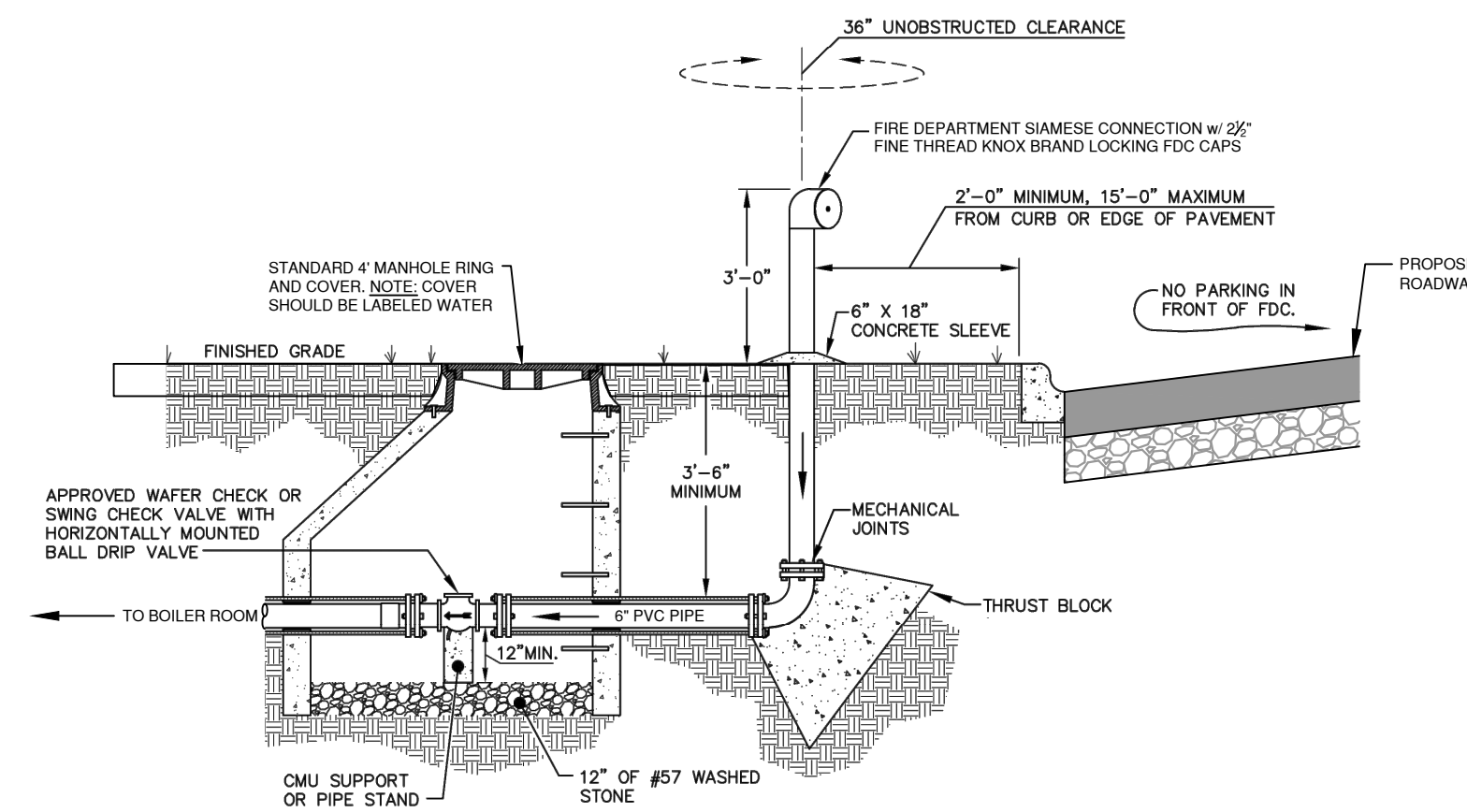
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 W-20

COMBINATION AIR RELEASE VALVE

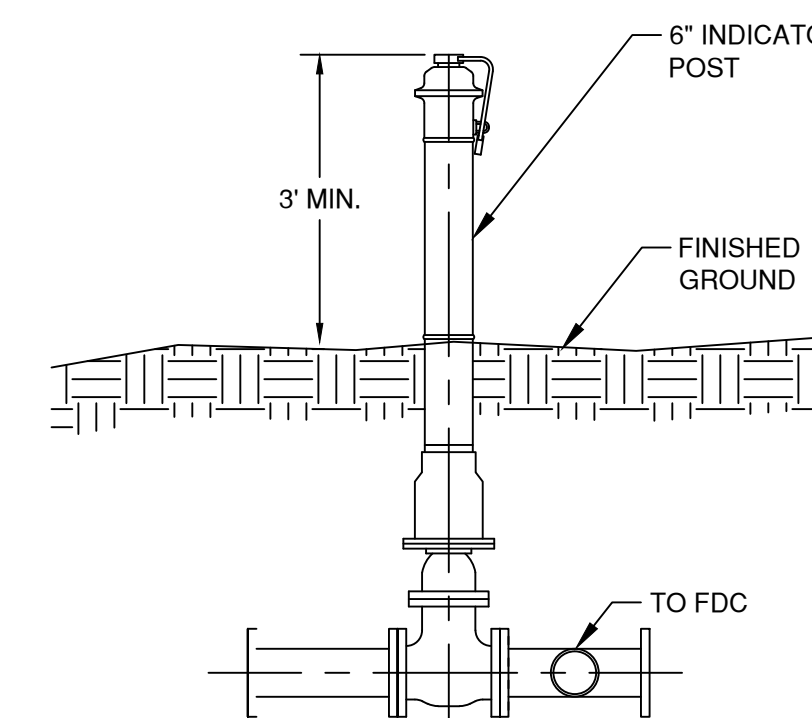
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 W-21



1 Double Check Detector Assembly
 Not to Scale



2 FDC and Check Valve
 Not to Scale



3 Post Indicator Valve
 Not to Scale



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Utility Details

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: 60%
 Date: 11-29-2023

FOR REVIEW

KYLE W. BRYAN
 STATE OF WASHINGTON
 LICENSED PROFESSIONAL ENGINEER
 11/29/2023

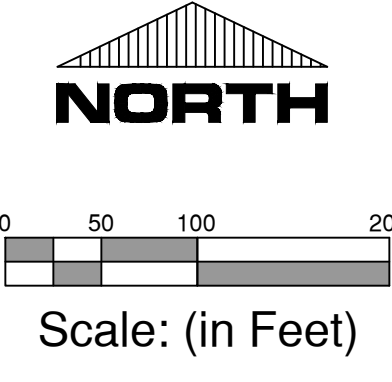
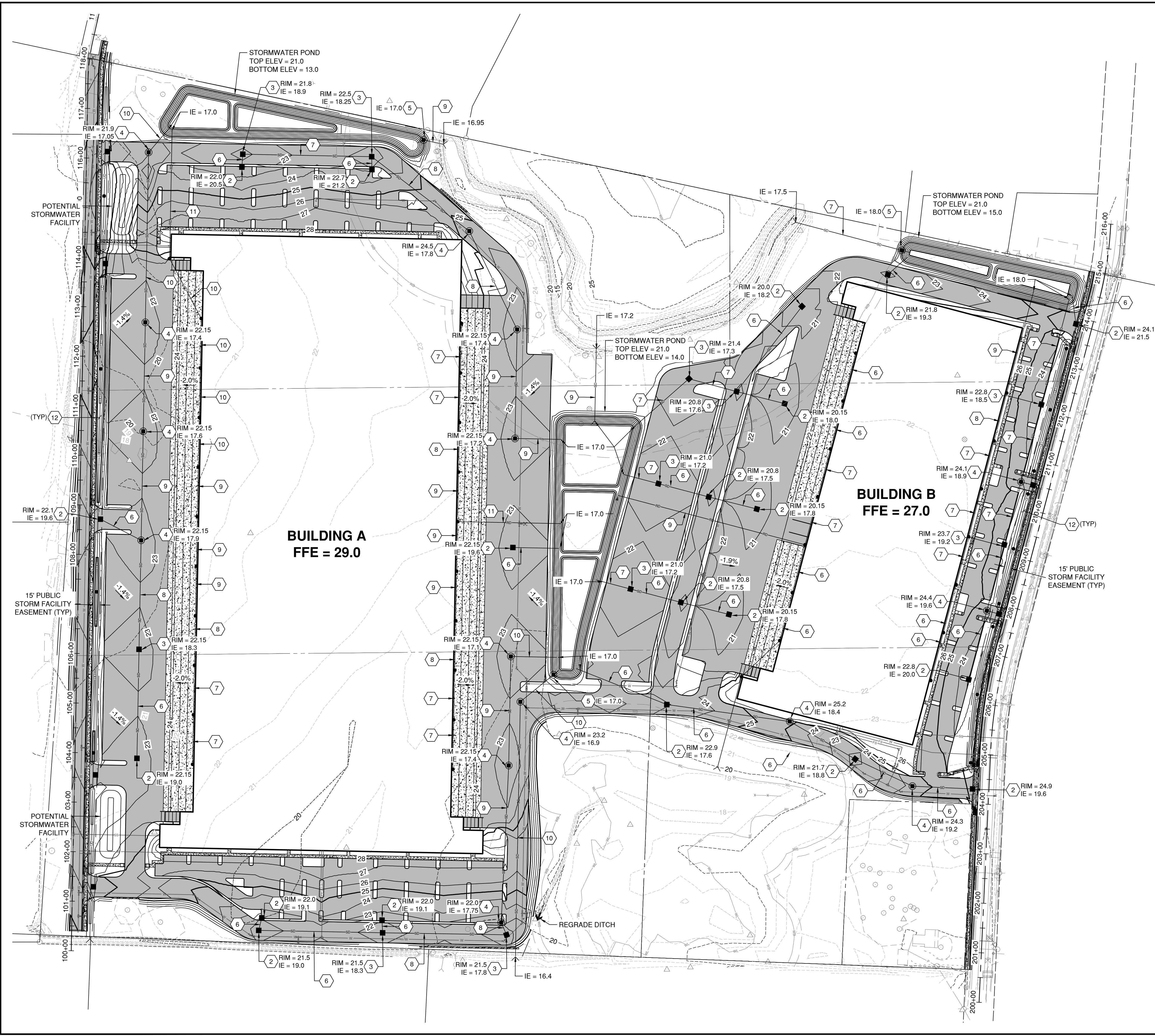
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 Checked by: CLR
 Approved by: KWB

Project Number:
0788.0259

Drawing Number:
C3.4

Sheet Number:
9 of 24

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- LEGEND:**
- STORM DRAIN LINE
 - ROOF DRAIN LINE
 - DITCH/SWALE LINE
 - STORM DRAIN CLEANOUT
 - STORM DRAIN TYPE 2 CATCH BASIN
 - STORM DRAIN CATCH BASIN
 - RIP RAP PAD
 - - -24.0 - - - EXISTING MINOR CONTOUR
 - - -24.0 - - - EXISTING MAJOR CONTOUR
 - 24.0— PROPOSED MINOR CONTOUR
 - 24.0— PROPOSED MAJOR CONTOUR

- STORM DRAINAGE CONSTRUCTION NOTES:**
1. INSTALL ROOF DRAIN BASIN
 2. INSTALL STORM DRAIN CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20-03.
 3. INSTALL STORM DRAIN CATCH BASIN TYPE 1L PER WSDOT STANDARD PLAN B-5.40-02.
 4. INSTALL STORM DRAIN CATCH BASIN TYPE 2 PER WSDOT STANDARD PLAN B-10.20-03.
 5. INSTALL 54-INCH DIAM FLOW CONTROL STRUCTURE
 6. INSTALL 12-INCH CPSSP STORM DRAIN PIPE @ S = 0.0030 FT/FT MIN
 7. INSTALL 15-INCH CPSSP STORM DRAIN PIPE @ S = 0.0023 FT/FT MIN
 8. INSTALL 18-INCH CPSSP STORM DRAIN PIPE @ S = 0.0018 FT/FT MIN
 9. INSTALL 24-INCH CPSSP STORM DRAIN PIPE @ S = 0.0012 FT/FT MIN
 10. INSTALL 30-INCH CPSSP STORM DRAIN PIPE @ S = 0.0009 FT/FT MIN
 11. INSTALL 36-INCH CPSSP STORM DRAIN PIPE @ S = 0.0007 FT/FT MIN
 12. CONSTRUCT BIORETENTION FACILITY PER DETAIL 1, DWG C4.1

- GENERAL STORM DRAINAGE NOTES:**
1. CONTRACTOR TO POTHOLE AND VERIFY PIPE SIZE, TYPE AND INVERTS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR CONSTRUCTION OF UPSTREAM UTILITIES.
 2. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITY TYPE, SIZE OR INVERT ELEVATIONS DIFFER FROM INFORMATION SHOWN ON THE CONTRACT DRAWINGS.
 3. LOCATES MUST BE CALLED IN 48 HOURS PRIOR TO EXCAVATION.
 4. FOUNDATION DRAINS SHALL BE 4-IN Ø, PERFORATED, FLEXIBLE PVC DRAIN PIPE BACKFILLED WITH A MINIMUM OF 2 CUBIC FT OF OPEN GRADED DRAIN ROCK PER LF OF PIPE. DRAIN ROCK TO BE ENCASED IN GEOTEXTILE FABRIC. FOUNDATION DRAINS SHALL BE POSITIVELY SLOPED AND DAYLIGHT WITH A RIP RAP PAD. ROOF DRAINS SHOULD NOT BE CONNECTED TO FOUNDATION DRAINS.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Grading, Storm & TESC Plan

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: 60%
 Date: 11-29-2023



Designed by: GWM
 Checked by: CLR
 Approved by: KWB

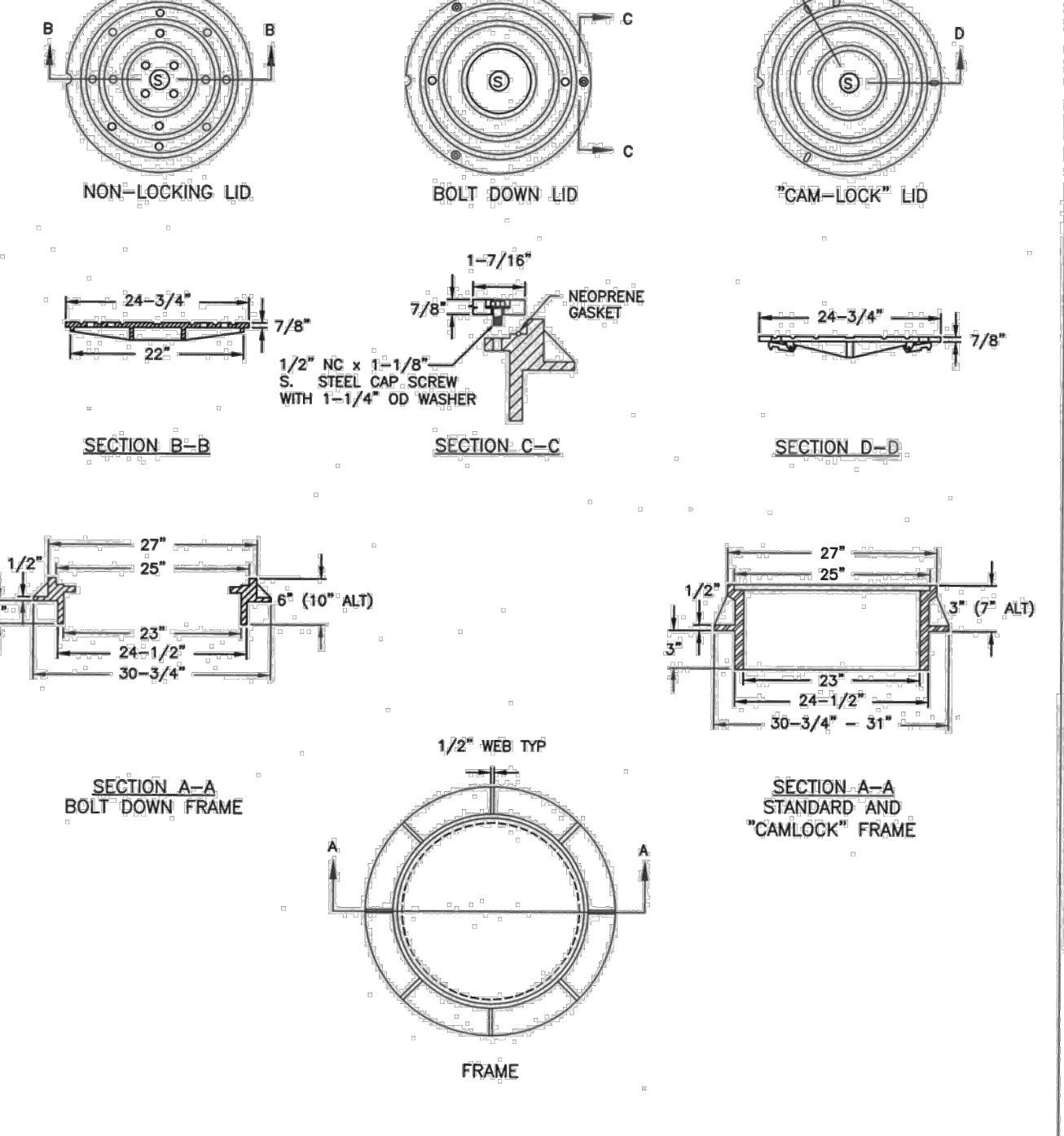
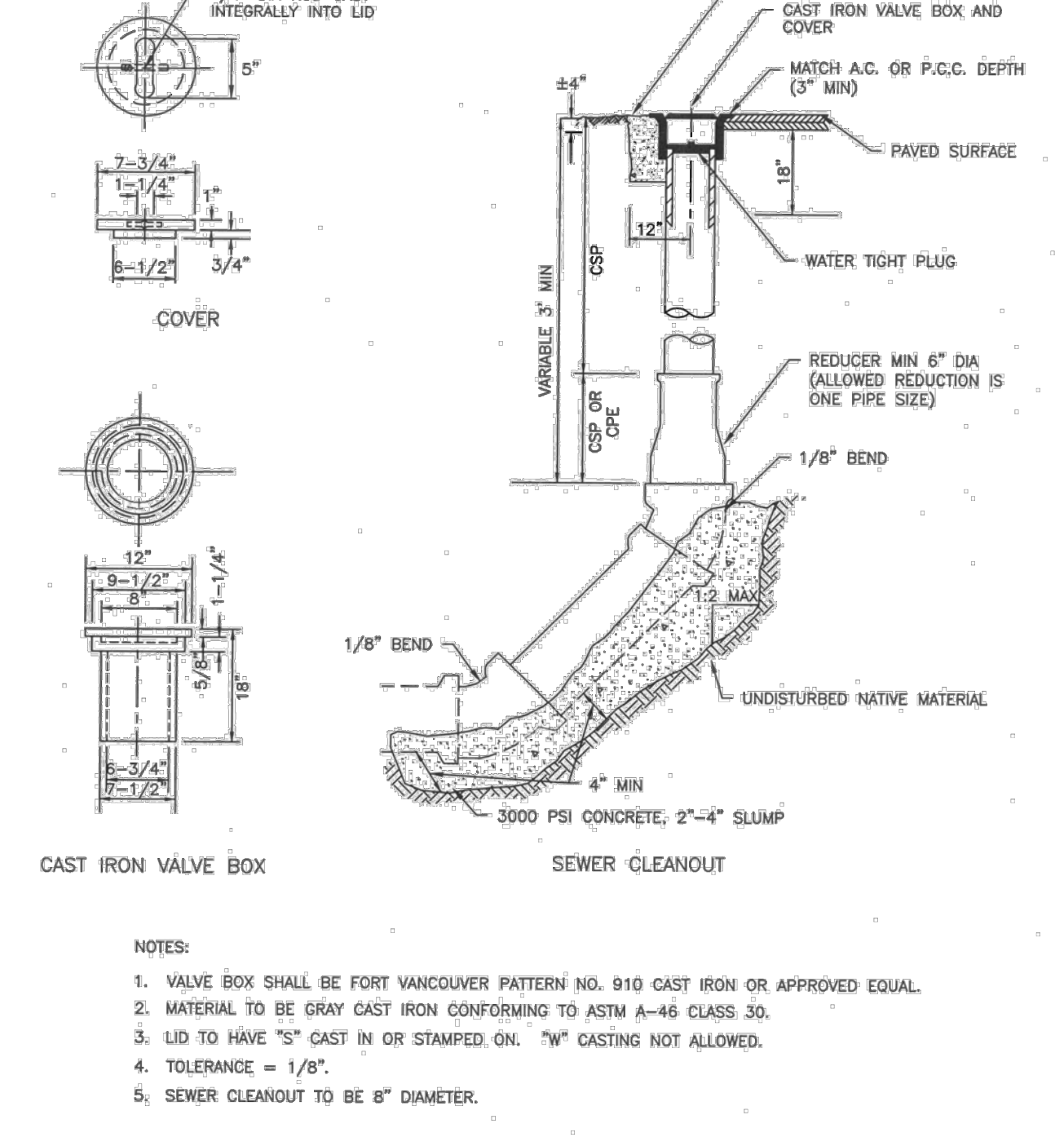
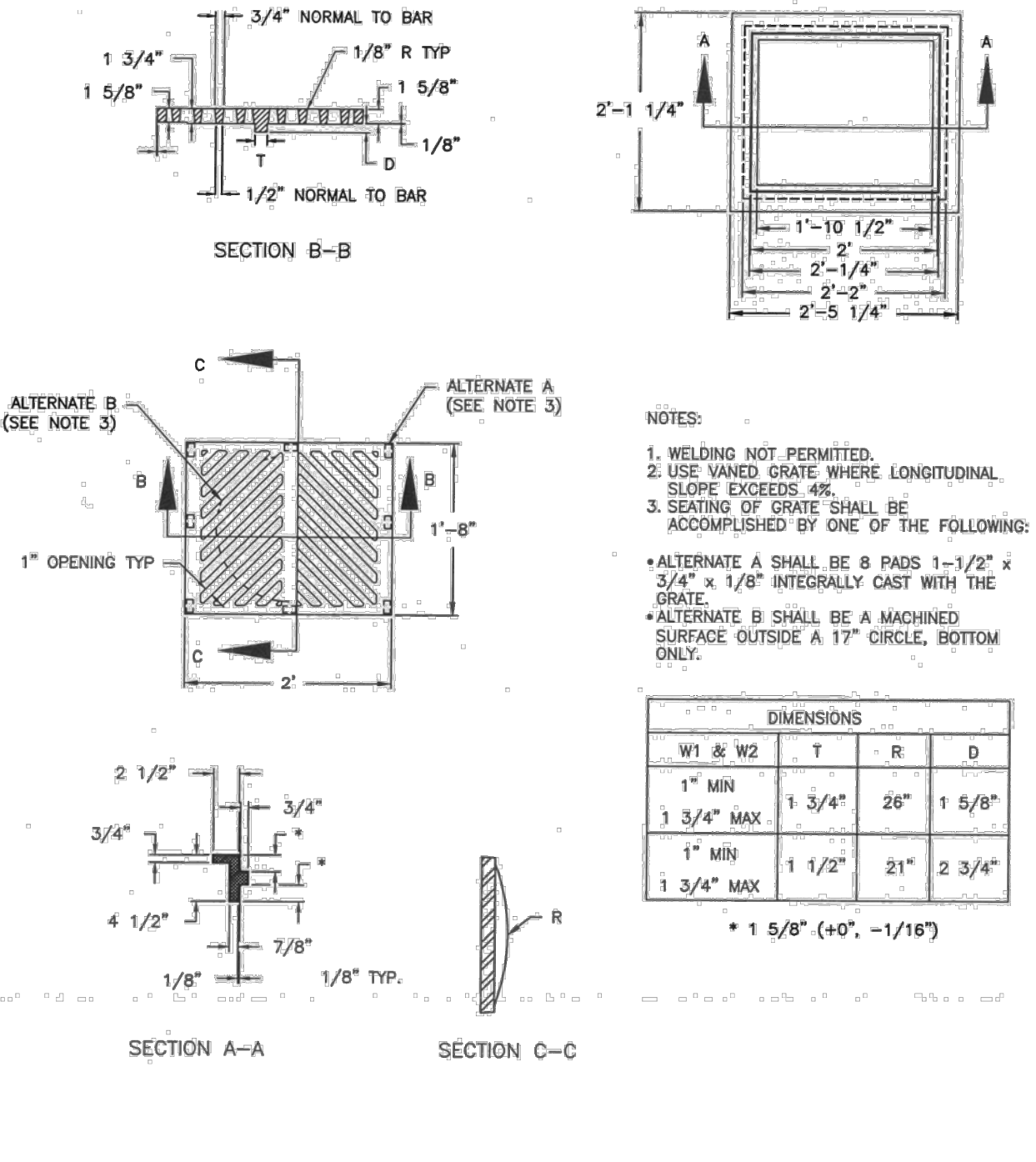
Project Number:
0788.0259

Drawing Number:
C4.0

Sheet Number:
10 of 24

GENERAL NOTES FOR STORM SEWERS

- ALL MATERIALS AND INSTALLATION OF STORM SEWERS AND DRAINAGE SYSTEMS SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS IN THE CITY OF WOODLAND'S LATEST VERSION OF STANDARD DETAILS, THE PUBLIC WORKS ENGINEERING STANDARDS, AND THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, WHERE THE CITY OF WOODLAND REQUIREMENTS SHALL TAKE PRECEDENCE. WHEREVER THE STANDARD SPECIFICATIONS REFER TO THE OWNER AS EITHER THE "STATE" OR "SECRETARY" OR WHEN REFERENCE IS MADE TO THE DEPARTMENT OF TRANSPORTATION IT SHALL BE UNDERSTOOD THAT THE STANDARD SPECIFICATIONS SHOULD READ THE "CITY".
- ALL STORM SEWER AND DRAINAGE SYSTEM CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF WOODLAND'S PUBLIC WORKS DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS OFFICE (360) 225-7999 AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION. THE CITY MAY REQUIRE THAT A PRECONSTRUCTION CONFERENCE BE HELD.
- THE CONTRACTOR IS REQUIRED TO NOTIFY ALL UTILITIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MAY CONTACT THE UTILITY NOTIFICATION CENTER BY DIALING 811 IN LIEU OF CONTACTING INDIVIDUAL UTILITIES.
- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR TO PROCURE AND COMPLY WITH THE PROVISIONS OF ALL APPLICABLE PERMITS, EASEMENTS, LICENSES AND CERTIFICATES IN CONJUNCTION WITH THE CONSTRUCTION OF STORM SEWERS AND DRAINAGE SYSTEMS. COMPLIANCE SHALL BE AT ALL LEVELS: FEDERAL, STATE, AND CITY, RELATING TO THE PERFORMANCE OF THIS WORK. THE CONTRACTOR SHALL OBTAIN A STREET CUT PERMIT FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL OBTAIN AND SUBMIT AN APPROVED TRAFFIC CONTROL PLAN PRIOR TO BEGINNING CONSTRUCTION. THE PLAN SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
- ALL EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND EROSION CONTROL DETAILS, PRIOR TO START OF ANY CONSTRUCTION OR LAND DISTURBING ACTIVITY.
- THE DEVELOPER OR CONTRACTOR SHALL OBTAIN ALL OFFSITE CONSTRUCTION EASEMENTS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THAT ALL OFFSITE UTILITIES EASEMENTS HAVE BEEN OBTAINED BY THE OWNER PRIOR TO THE COMMENCEMENT OF ANY OFFSITE CONSTRUCTION.
- THE CONTRACTOR IS TO VERIFY AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER. ITEMS TO VERIFY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- INVERT AND TOP ELEVATIONS OF EXISTING STORM SEWERS
- CENTERLINE AND TOP OF CURB ELEVATIONS
- WATER QUALITY DEVICES WILL BE INSTALLED AND FUNCTIONING PRIOR TO COMMENCING WITH INSTALLATION OF PAVEMENT FOR ALL AREAS DRAINING INTO THE WATER QUALITY SYSTEM. VEGETATION IN BIO-FILTRATION SWALE AND POND SYSTEMS SHALL BE ESTABLISHED AND MECHANICAL DEVICES AND FILTER MEDIA SHALL BE INSTALLED. SWALES AND FILTER STRIPS WILL BE SEEDED WITH AN APPROVED SEED MIX PER THE WESTERN WASHINGTON MANUAL. TURF IS ALLOWED FOR VEGETATED FILTERS PROVIDED THE TURF AREA IS OVERSEEDDED WITH THE EQUIVALENT GRASS SEED MIX.
- ALL CATCH BASINS SHALL BE STENCILED: "PROTECT STREAMS" OR "PROTECT GROUNDWATER."
- ROOF DOWNSPOUT RUNOFF MUST BE RETAINED ON EACH SPECIFIC SITE. DOWNSPOUTS SHALL NOT DRAIN TO THE STREET OR ANY ADJACENT PROPERTIES UNLESS SPECIFIC APPROVAL HAS BEEN SHOWN ON APPROVED CIVIL ENGINEERING PLANS.
- THE CONTRACTOR WILL PROVIDE A TELEVISION REPORT, TAPE, AND TABULAR AS-BUILT OF ALL PUBLIC STORM MAINS AND LATERALS PRIOR TO PAVING. THIS INFORMATION WILL BE SUBMITTED TO THE CITY INSPECTOR FOR REVIEW AND ACCEPTANCE OF THE TV INSPECTION WILL BE BASED UPON MANUFACTURING AND INSTALLATION DEFECTS, AS WELL AS DEBRIS IN THE LINES. FINAL ACCEPTANCE AND CONSTRUCTION OF STORM SEWERS ARE SUBJECT TO INSPECTION AND TESTING IN ACCORDANCE WITH SECTIONS 1-05.11, 1-05.12, AND 7-04.3 OF THE STANDARD SPECIFICATIONS.

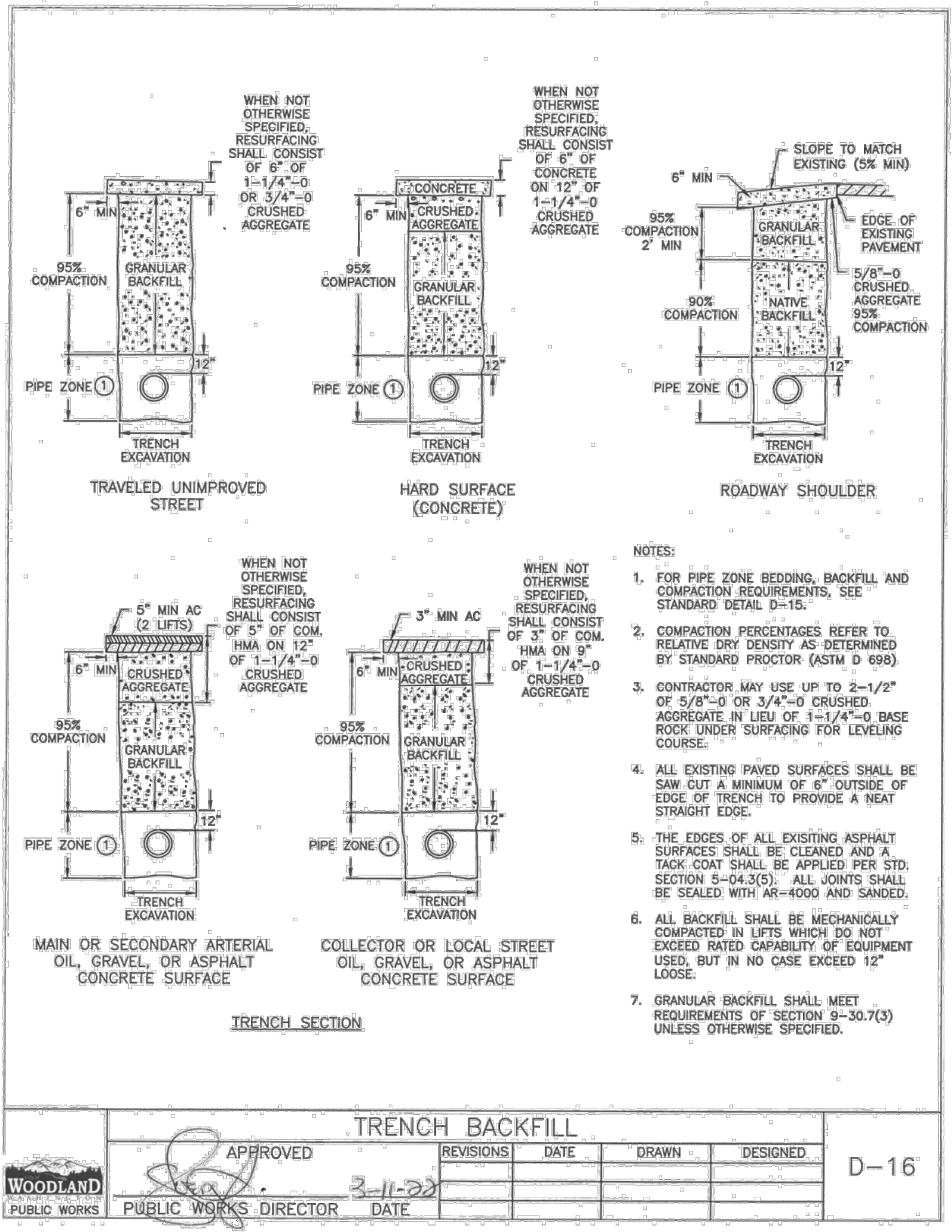
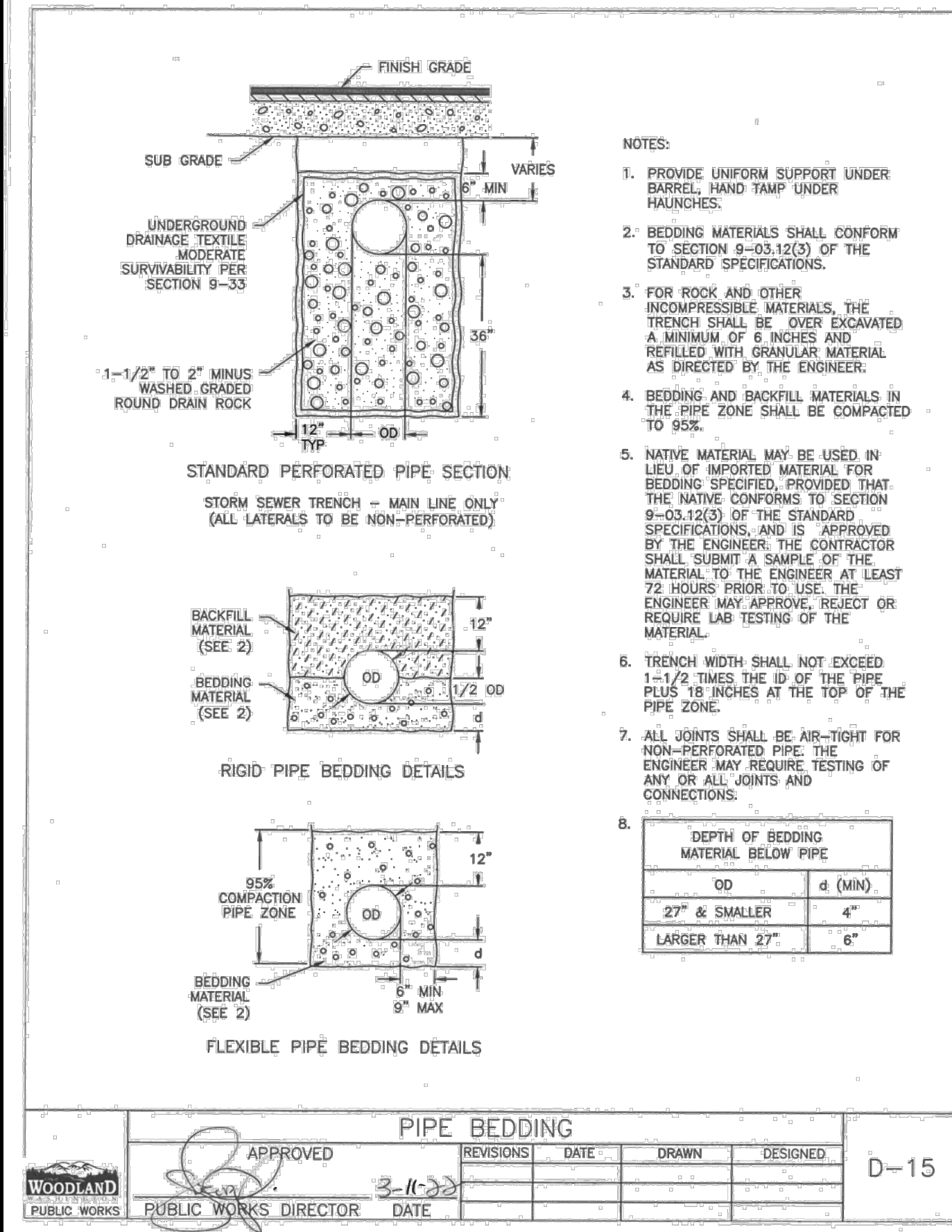


GENERAL NOTES FOR STORM SEWERS					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-01
PUBLIC WORKS DIRECTOR					

HERRINGBONE GRATE					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-08
PUBLIC WORKS DIRECTOR					

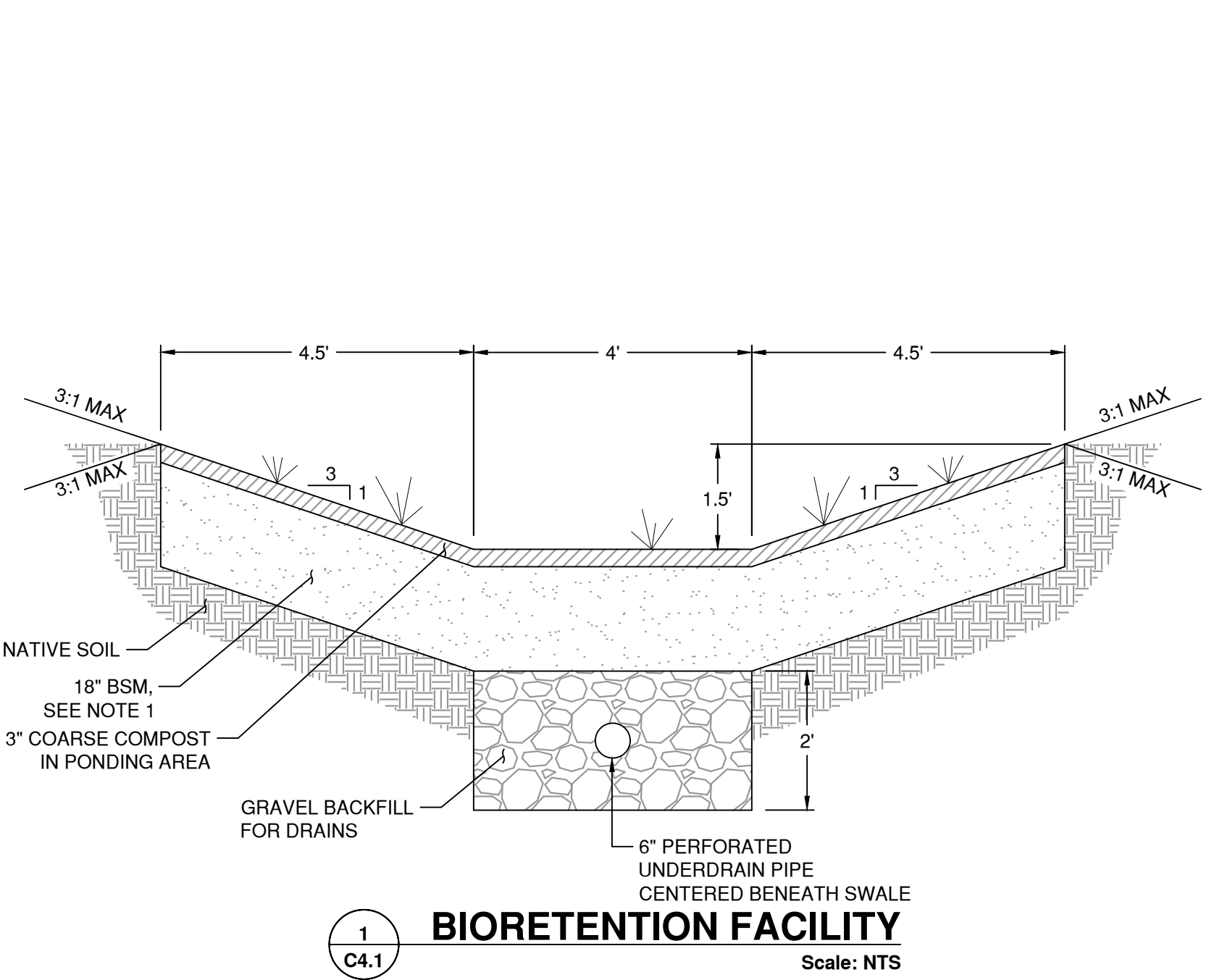
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APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-13
PUBLIC WORKS DIRECTOR					

MANHOLE COVER AND FRAME					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-14
PUBLIC WORKS DIRECTOR					



PIPE BEDDING					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-15
PUBLIC WORKS DIRECTOR					

TRENCH BACKFILL					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-16
PUBLIC WORKS DIRECTOR					



BIORETENTION FACILITY
Scale: NTS

PIPE BEDDING					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-15
PUBLIC WORKS DIRECTOR					

TRENCH BACKFILL					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					D-16
PUBLIC WORKS DIRECTOR					

TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
Woodland, Washington
Storm Drain Details

Datum: NAD83 / NAVD 88
Survey Book: 1900, 1900 A & B
Project Milestone: 60%
Date: 11-29-2023

Designed by: KWB
Checked by: CLR
Approved by: KWB

Project Number:
0788.0259

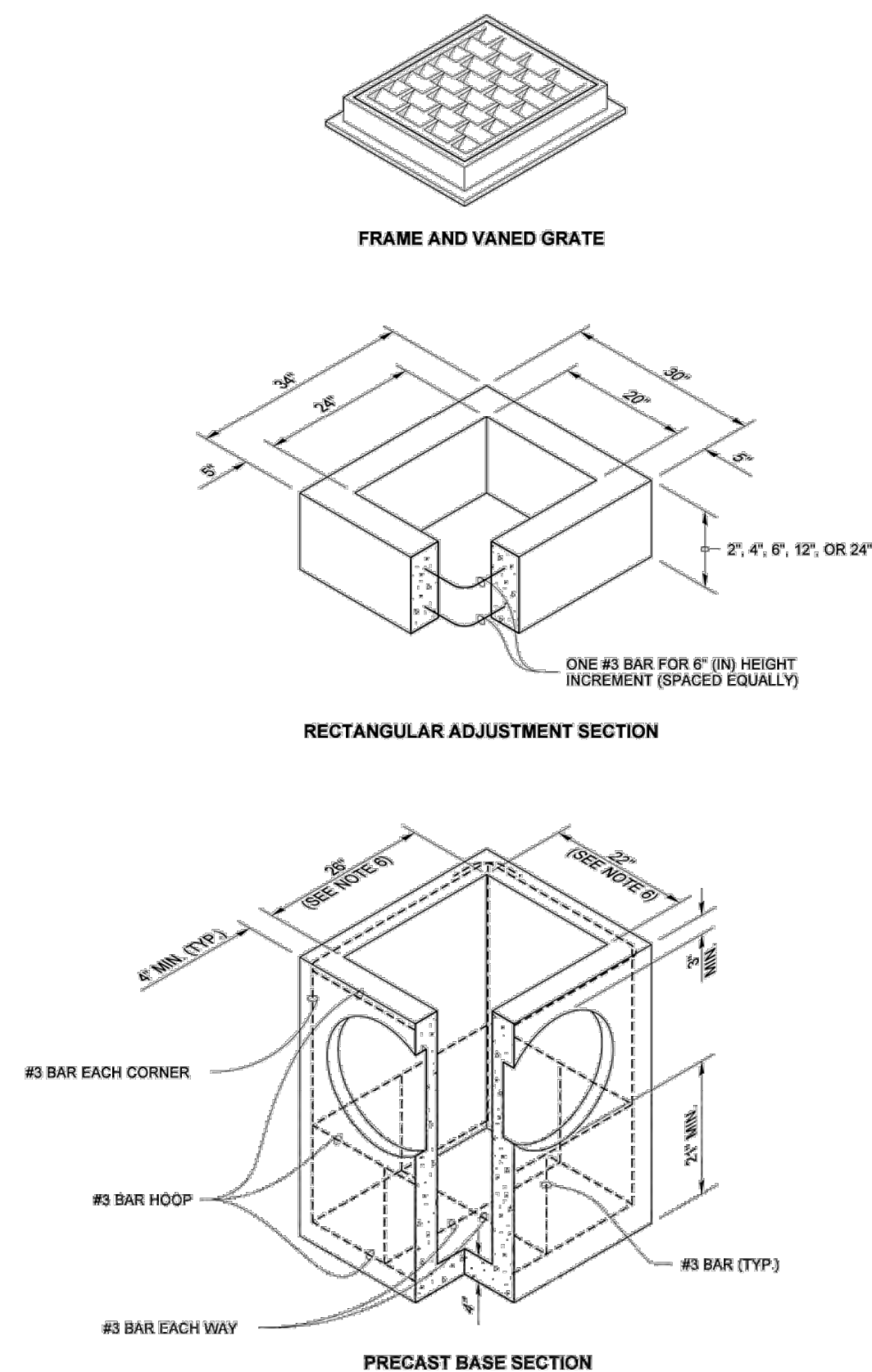
Drawing Number:
C4.1

Sheet Number:
11 of 24

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DRAWN BY: FEIN LIDDELL



PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

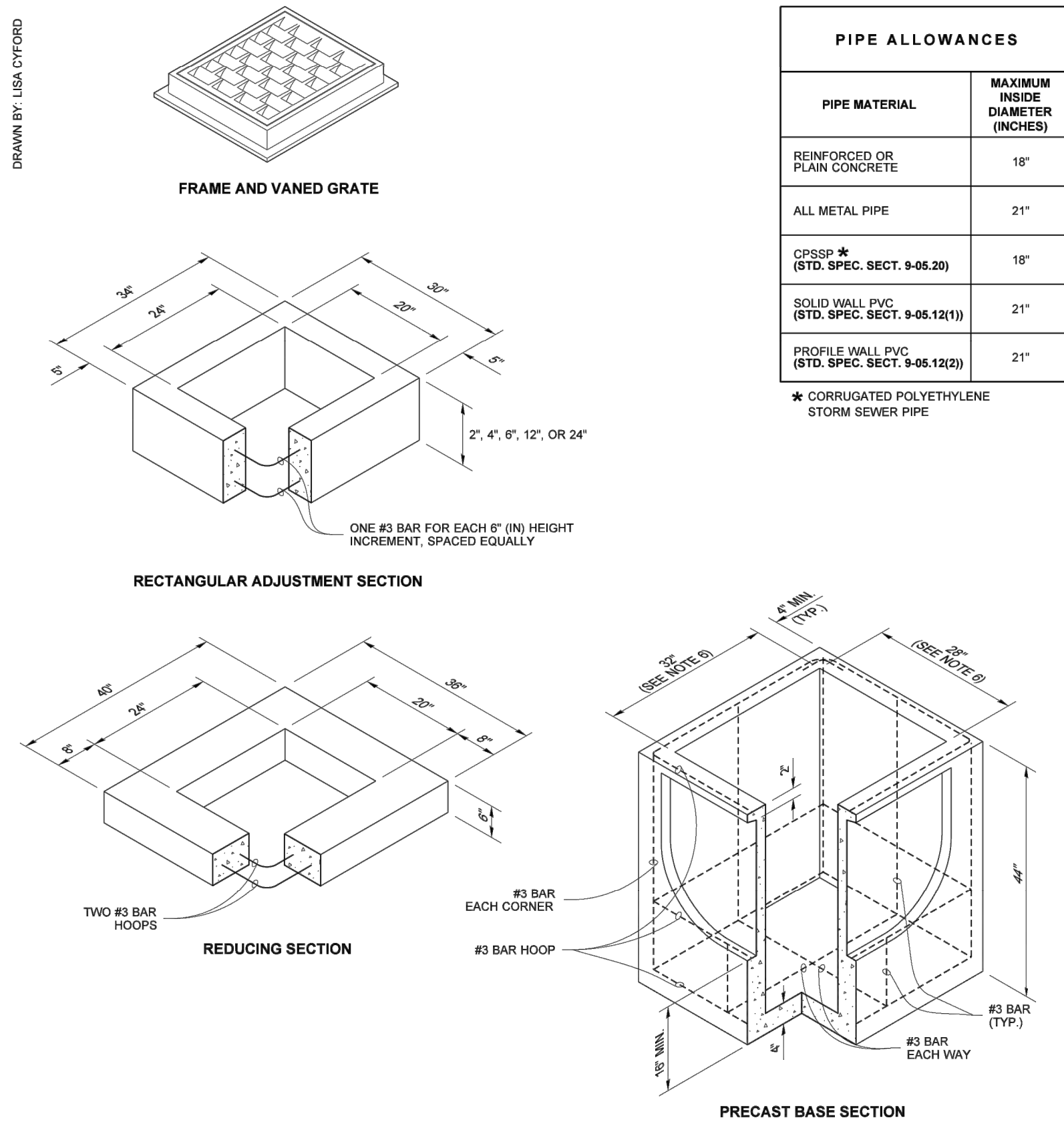
NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.

CATCH BASIN TYPE 1
STANDARD PLAN B-5.20-03
 SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
 Roark, Steve
Digitally signed by Roark, Steve
 Date: 2023.09.09 09:45:23 -0700
 STATE DESIGN ENGINEER
 Washington State Department of Transportation

DRAWN BY: LISA OYFORD



PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. SECT. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	21"

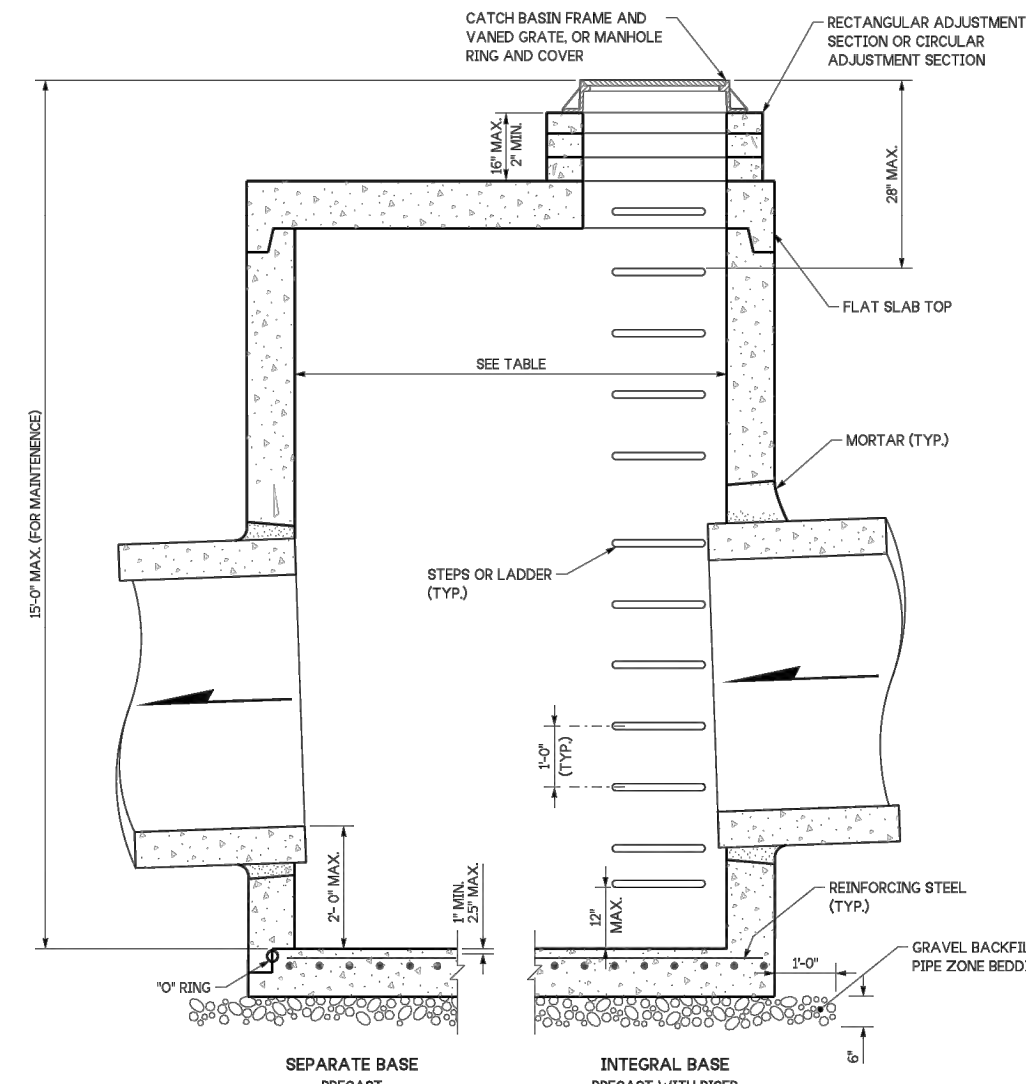
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout shall not be greater than 26" (in), in any direction. Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.

CATCH BASIN TYPE 1L
STANDARD PLAN B-5.40-02
 SHEET 1 OF 1 SHEET

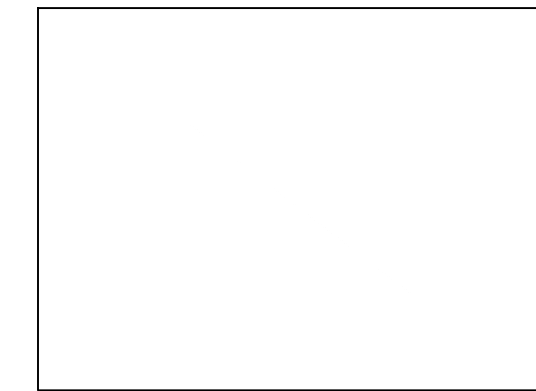
APPROVED FOR PUBLICATION
 Carpenter, Jeff
Jan 20 2018 9:48 AM
 STATE DESIGN ENGINEER
 Washington State Department of Transportation



CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	6"	42"	8"
60"	5"	6"	48"	8"
72"	6"	6"	60"	12"
84"	6"	12"	72"	12"
96"	6"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	CONCRETE	ALL METAL	CPSSP (1)	SOLID WALL PVC (2)	PROFILE WALL PVC (3)
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- (1) Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)
 (2) See Standard Specification Section 9-05.12(1)
 (3) See Standard Specification Section 9-05.12(2)
 (4) Polypropylene Pipe (See Standard Specification Section 9-05.24)

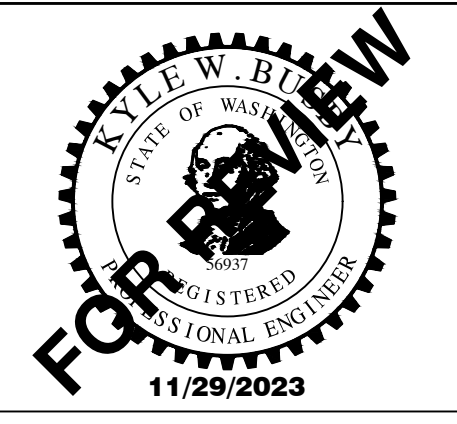


CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-03
 SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
 Moth & Haines
 Aug 23, 2023
 STATE DESIGN ENGINEER
 Washington State Department of Transportation

TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Storm Drain Details

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: 60%
 Date: 11-29-2023



Designed by: KWB
 Checked by: CLR
 Approved by: KWB

Project Number:
0788.0259

Drawing Number:
C4.2

Sheet Number:
12 of 24



DRAWING: T:\PROJECTS\0788 MSC ENG PROJECT\0259 BOZORTH PROPERTY SURVEY CONTRACT DRAWINGS\07880259 STORM DETAILS.DWG, LAYOUT TAB: CA-3, PLOT DATE: 11/29/2023 15:22:23 PM, DRAWING SAVE DATE: 11/20/2023 12:46:52 PM, PLOTTED BY: KRUSBY
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Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: **60%**
 Date: **11-29-2023**

Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259
 Drawing Number:
C4.3
 Sheet Number:
13 of 24

GENERAL EROSION PREVENTION & SEDIMENT CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO ANY LAND DISTURBING ACTIVITY CAUSED BY CLEARING OR GRADING. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE APPROVED BY THE CITY EROSION CONTROL SPECIALIST PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL CALL FOR AN ON-SITE INSPECTION WHEN EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND PRIOR TO COMMENCEMENT OF WORK.
- THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE SITED, DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS IN THE CITY OF WOODLAND'S LATEST STANDARD DETAILS AND THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANUAL FOR WESTERN WASHINGTON, WHERE THE CITY OF WOODLAND GENERAL REQUIREMENTS SHALL TAKE PRECEDENCE.
- THE DEVELOPER IS RESPONSIBLE FOR MAINTAINING EROSION PREVENTION AND SEDIMENT CONTROL MEASURES DURING AND AFTER INSTALLATION OF ALL UTILITY WORK ASSOCIATED WITH UTILITY TRENCHES.
- PRIOR TO ANY SITE EXCAVATION, ALL STORM DRAINAGE DETAILS SHALL BE PROTECTED DOWN SLOPE FROM ANY DISTURBED OR CONSTRUCTION AREAS PER THE STANDARD DETAILS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREAS. CLEAN THE FILTER FABRIC AS NECESSARY TO MAINTAIN DRAINAGE. REMOVE FILTER AND CLEAN CATCH BASINS FOLLOWING COMPLETION OF SITEWORK.
- THE CONTRACTOR SHALL NOT ALLOW SEDIMENT OR DEBRIS TO ENTER NEW OR EXISTING PIPES, CATCH BASINS OR INFILTRATION SYSTEMS.
- NEWLY CONSTRUCTED OR MODIFIED INLETS AND CATCH BASINS ARE TO BE PROTECTED IMMEDIATELY UPON INSTALLATION.
- TEMPORARY SEEDING AND MULCHING OF SLOPES AND DIVERSION DRAINS SHALL BE COMPLETED WITHIN ONE WEEK AFTER ROUGH GRADING.
- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) DURING THE PERIOD FROM OCTOBER 1 TO APRIL 30 NO SOIL SHALL BE EXPOSED FOR MORE THAN TWO (2) DAYS. FROM MAY 1 TO SEPTEMBER 30 NO SOIL SHALL BE EXPOSED FOR MORE THAN SEVEN (7) DAYS.
- WATERWAY STRUCTURES ARE TO BE PROTECTED BY THE FOLLOWING MEANS:
 TEMPORARY: COVER PILES WITH TAPPS OR PLASTIC SHEETING WEIGHTED WITH CONCRETE BLOCKS, LUMBER OR TIRES.
 PERMANENT: COVER PILES WITH TAPPS OR PLASTIC SHEETING WEIGHTED WITH CONCRETE BLOCKS, LUMBER OR TIRES.
 FILTER FABRIC FENCES UNTIL SOIL SURFACE IS STABILIZED WITH RESEEDING.
- THE CONTRACTOR SHALL MAINTAIN ON SITE A WRITTEN DAILY LOG OF EROSION CONTROL BMP MAINTENANCE.
- IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR IMPROPER EROSION PREVENTION BMPs, CITATIONS AND/OR A STOP WORK ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY OF WOODLAND. IF THE BMPs APPLIED TO A SITE ARE INSUFFICIENT TO PREVENT SEDIMENT FROM REACHING WATER BODIES, ADJACENT PROPERTIES, OR PUBLIC RIGHT-OF-WAY, THEN THE PUBLIC WORKS DIRECTOR SHALL REQUIRE ADDITIONAL BMPs.

PROTECTION OF ADJACENT PROPERTIES, BODIES AND STRUCTURES

- PROVIDE A 12'-HIGH KEEP PAD OF CRUSHED ROCK FOR A DISTANCE OF 100 FEET INTO THE SITE FOR ALL ACCESS POINTS UTILIZED BY CONSTRUCTION EQUIPMENT AND TRUCKS. WIDTH OF THE PAD SHALL BE A MINIMUM OF 20 FEET. ALL TRUCKS LEAVING THE SITE SHALL CROSS ACROSS THE PAD. ACCUMULATED SOIL SHALL BE PERIODICALLY RAKED, OR ADDITIONAL ROCK SHALL BE PLACED UPON THE PAD SURFACE. ROCK SHALL BE CLEAN & FREE OF 1/2" OR LARGER QUARRY SPALLS. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ON TO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- PREVENT SHEETING AND SHORTING IS REQUIRED. WASHING THE PREVENT INTO THE STORM SYSTEM IS NOT PERMITTED.
- AT SITES WITH LESS THAN 1' LAYER OF EXPOSED SOIL, PAD LENGTH MAY BE REDUCED TO 50 FEET. SINGLE FAMILY LOT ENTRANCES MAY HAVE THE PAD LENGTH REDUCED TO 20 FEET. IF CONSTRUCTION OCCURS SIMULTANEOUSLY ON ADJACENT LOTS WITH THE SAME OWNER DURING CONSTRUCTION, ONE LOT ENTRANCE MAY BE USED FOR THE REMAINING LOTS.
- INSTALL SEDIMENT FENCE IN ACCORDANCE WITH THIS DETAIL SHEET PRIOR TO BUILDING CONSTRUCTION AND/OR EXCAVATION TO PREVENT SILT INTRUSION UPON ADJACENT LOTS. IF CONSTRUCTION OCCURS SIMULTANEOUSLY ON ADJACENT LOTS AND THE LOTS HAVE THE SAME OWNER DURING CONSTRUCTION, THE SILT FENCE ALONG THE COMMON LOT LINE MAY BE ELIMINATED.
- CONSTRUCTION AREAS AND PARKING AREAS SHALL BE STABILIZED WHATEVER THEY ARE CONSTRUCTED, WHETHER PERMANENT OR TEMPORARY, FOR THE USE OF CONSTRUCTION TRAFFIC.

MAINTENANCE OF SEDIMENT CONTROL BARRIERS

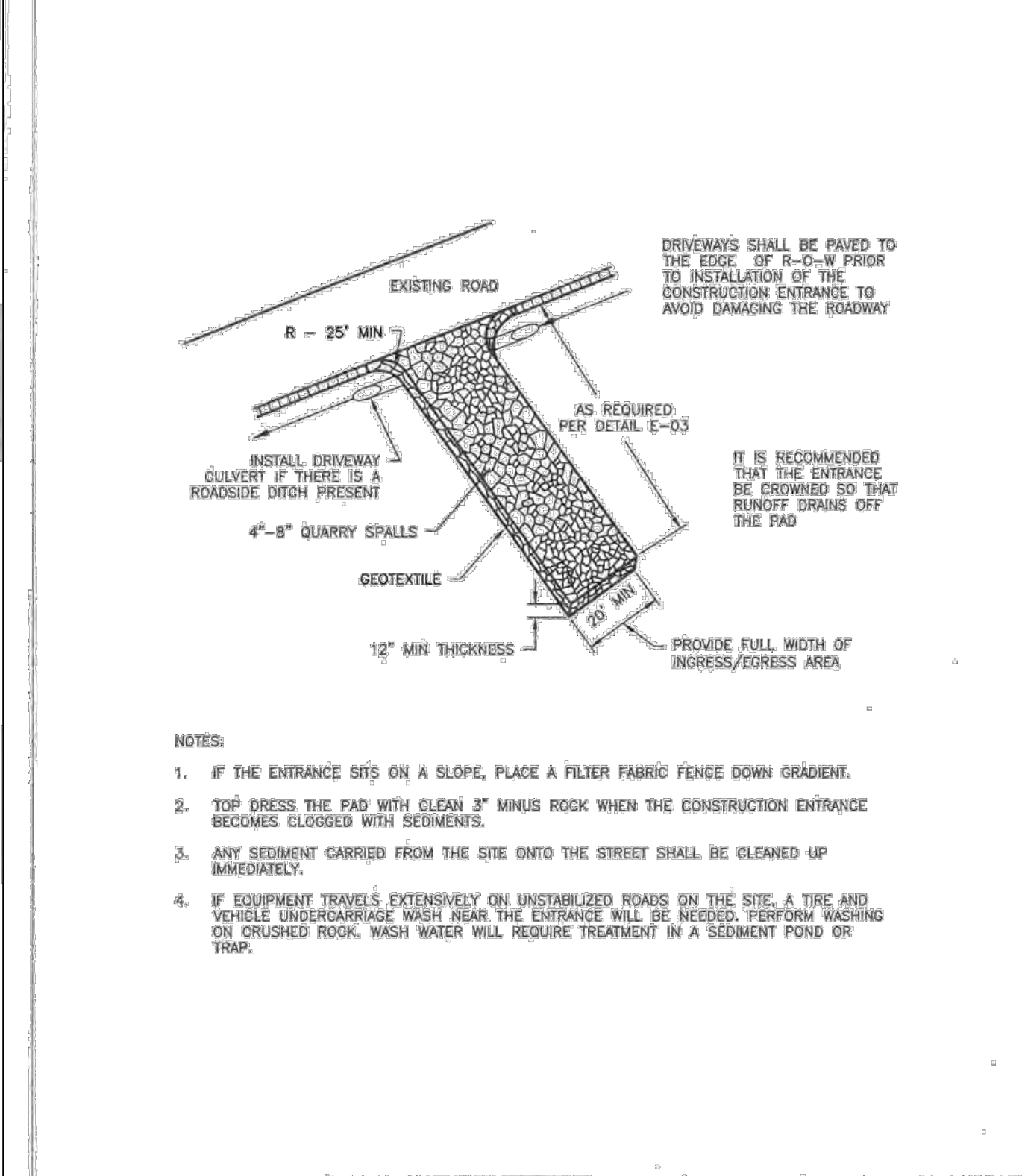
- MAINTAIN AND REMOVE ALL SEDIMENT CONTROLS AS SPECIFIED IN THE STANDARD DETAILS. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT FROM THE CATCH BASINS, DRAINAGE UTILITY TRENCHES AND STORM PIPES PRIOR TO ACCEPTANCE BY THE CITY.
- SEDIMENT CONTROL BMPs SHALL BE INSPECTED WEEKLY AND AFTER ANY STORM EVENT PRODUCING RUNOFF. THE INSPECTION FREQUENCY FOR STABILIZED, NATIVE STATES SHALL BE ONCE EVERY TWO WEEKS OR MORE FREQUENTLY AS DETERMINED BY THE LOCAL PERMITTING AUTHORITY BASED ON THE LEVEL OF SOIL STABILITY AND POTENTIAL FOR ADVERSE ENVIRONMENTAL IMPACTS.
- ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

DUST CONTROL

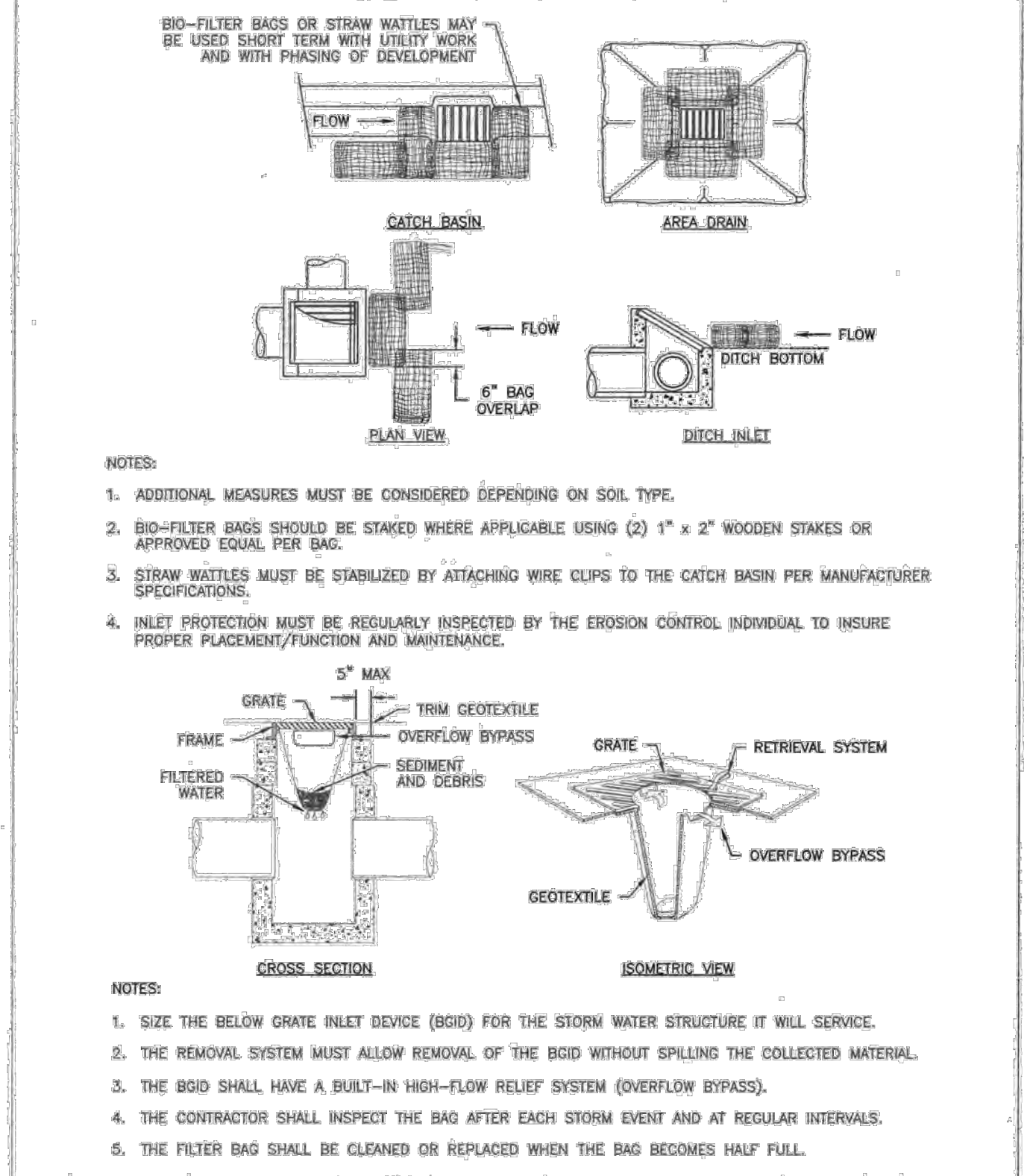
- IN AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST ONE OR MORE OF THE FOLLOWING PREVENTATIVE MEASURES SHALL BE TAKEN FOR DUST CONTROL:
 A. MINIMIZE THE PERIOD OF SOIL EXPOSURE THROUGH THE USE OF TEMPORARY GROUND COVER AND OTHER TEMPORARY STABILIZATION PRACTICES.
 B. SPRINKLE THE SITE WITH WATER UNTIL THE SURFACE IS WET.
 C. SPRAY EXPOSED SOIL AREAS WITH A DUST SUPPRESSANT. NOTE: USE OF PETROLEUM PRODUCTS OR POTENTIALLY HAZARDOUS MATERIALS ARE PROHIBITED.

TEMPORARY SEEDING

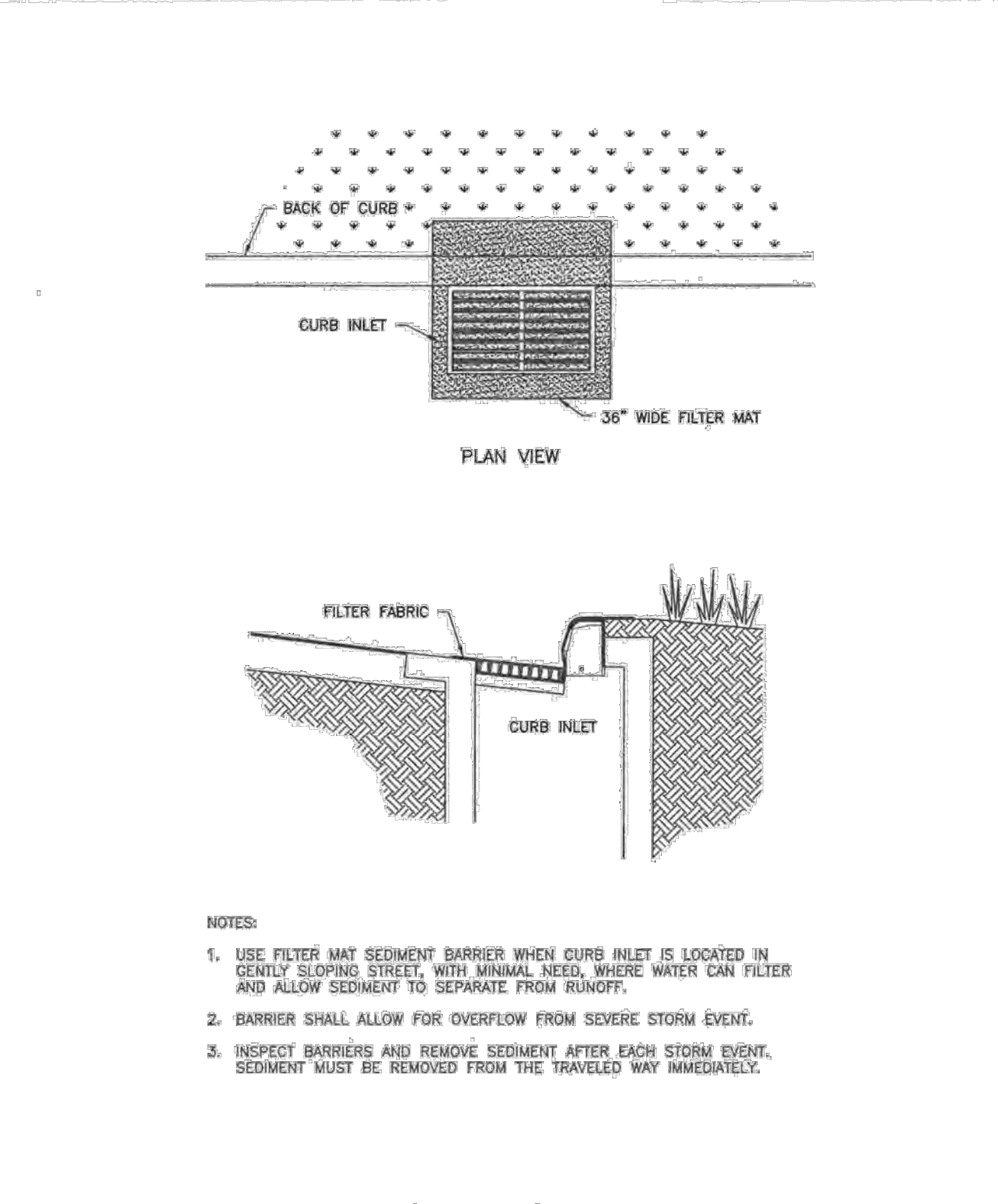
- EXPOSED SURFACES THAT WILL NOT BE BROUGHT TO FINAL GRADE OR GIVEN A PERMANENT COVER TREATMENT WITHIN 30 DAYS OF THE EXPOSURE SHALL HAVE SEED MIX AND MULCH PLACED TO STABILIZE THE SOIL AND REDUCE EROSION. SEDIMENTED AREAS SHALL BE CHECKED REGULARLY TO ASSURE A GOOD STAND OF GRASS IS BEING MAINTAINED. AREAS THAT FAIL TO ESTABLISH VEGETATION COVER ADEQUATE TO PREVENT EROSION WILL BE RESEED AS SOON AS SUCH AREAS ARE IDENTIFIED.
- APPLY AN APPROVED TEMPORARY SEEDING MIXTURE TO THE PREPARED SEED BED AT A RATE OF 100 LBS/ACRE. NOTE: "HYDROSEEDING" APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.



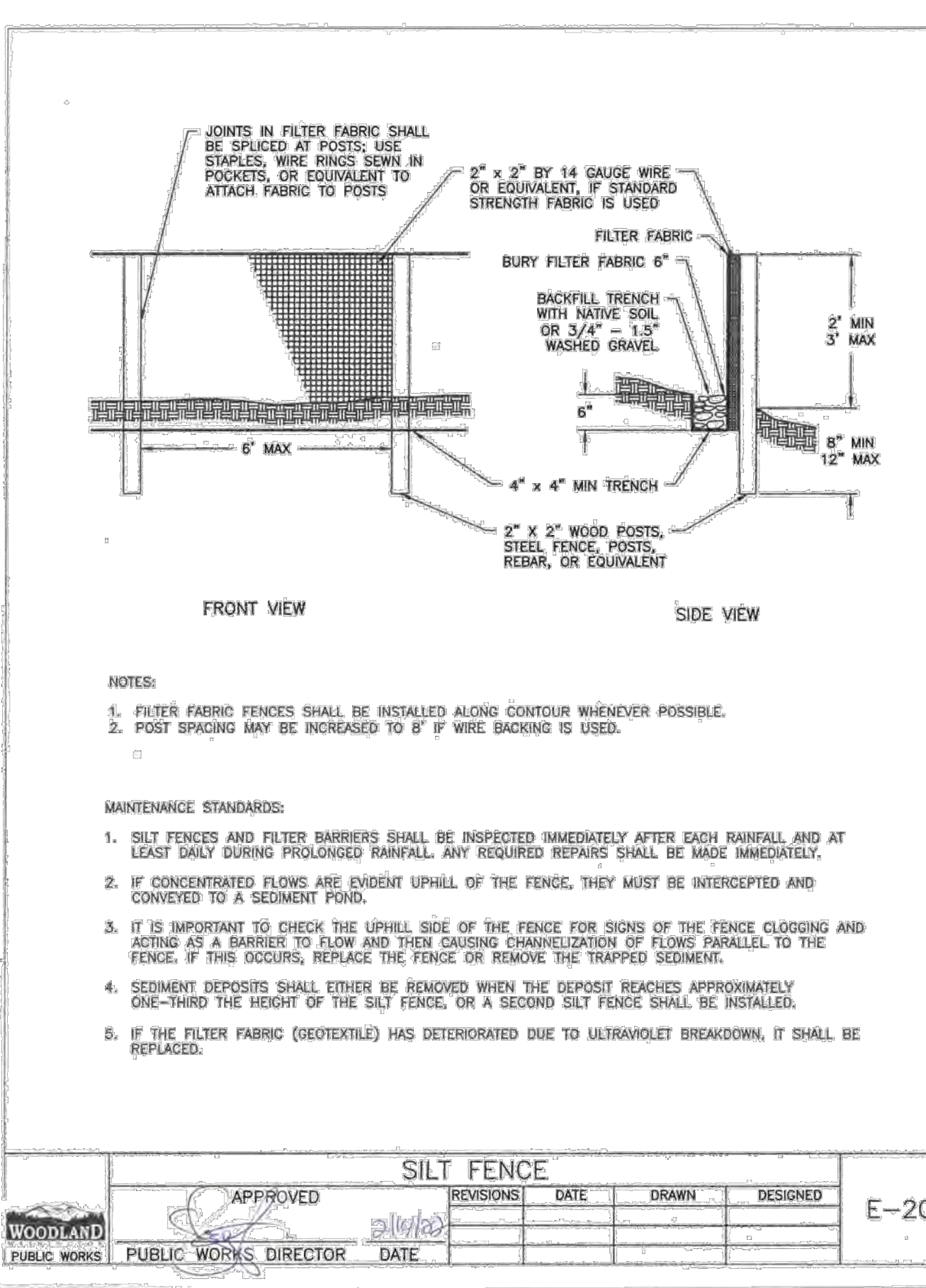
STABILIZED CONSTRUCTION ENTRANCE					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					E-05
PUBLIC WORKS DIRECTOR	DATE				



INLET PROTECTION (1 OF 2)					
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	
					E-16
PUBLIC WORKS DIRECTOR	DATE				

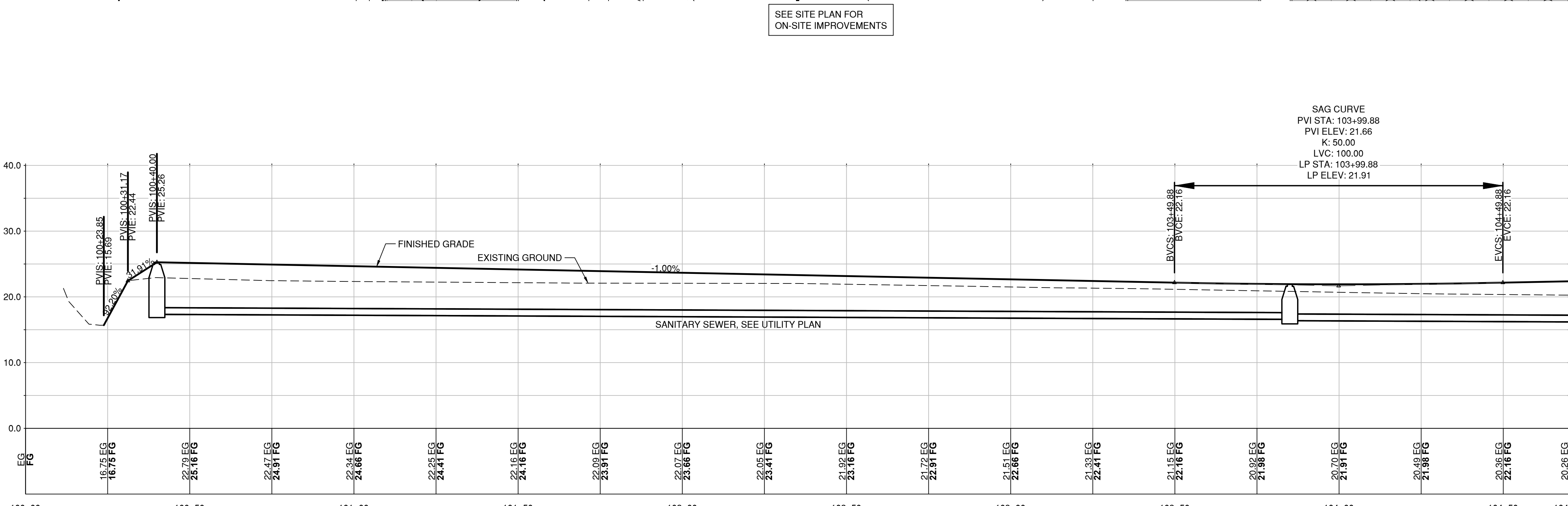
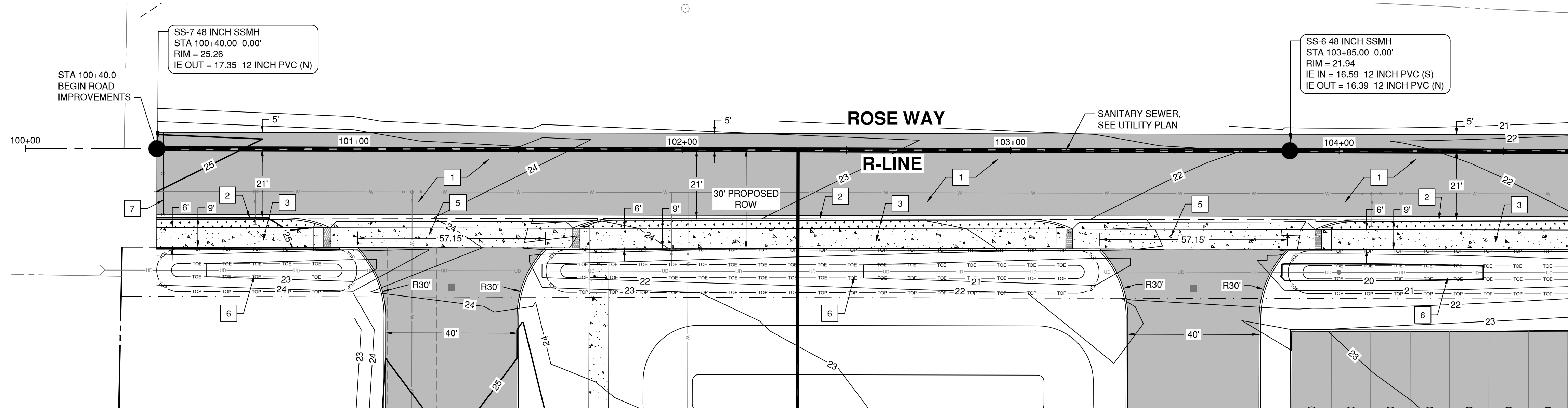


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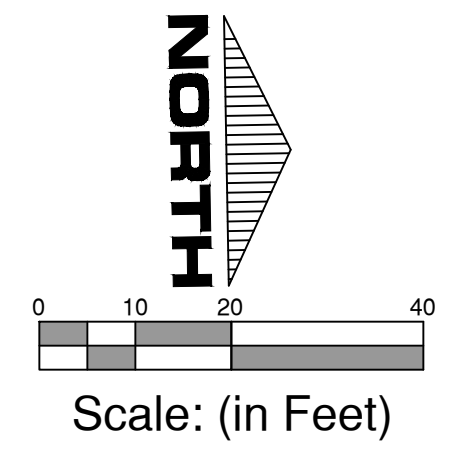


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PUBLIC WORKS DIRECTOR	DATE				

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Rose Way R-Line Profile
 Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'



LEGEND:

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- LANDSCAPING

- GENERAL SITE NOTES:**
- WITHIN ALL AREAS THAT HAVE BEEN SUBJECT TO CLEARING AND GRADING, ALL GRASS AND LANDSCAPED AREAS SHALL HAVE A MINIMUM 8-INCH SETTLED TOPSOIL LAYER PRIOR TO SEEDING AND PLANTING THAT MEETS THE CRITERIA PER BMP 15.13 IN THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL. V.

- # SITE CONSTRUCTION NOTES:**
- CONSTRUCT ROSE WAY PER TYPICAL SECTION DETAIL 1 ON SHEET C5.7.
 - CONSTRUCT TYPE A-1 CURB AND GUTTER PER COW STD T-01.
 - CONSTRUCT SIDEWALK PER COW STD T-07.
 - CONSTRUCT DRIVEWAY WITH DETACHED SIDEWALK PER COW STD T-03.
 - CONSTRUCT MAJOR COMMERCIAL DRIVEWAY PER COW STD T-06.
 - CONSTRUCT BIOTENTION SWALE PER GRADING AND STORM PLAN.
 - INSTALL TYPE 3 BARRICADE PER WSDOT STD PLAN K-80.20-00. BARRICADE TO SPAN WIDTH OF PAVEMENT.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Rose Way Plan & Profile
 Sta 100+00 to Sta 104+70

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: **60%**
 Date: **11-29-2023**

Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

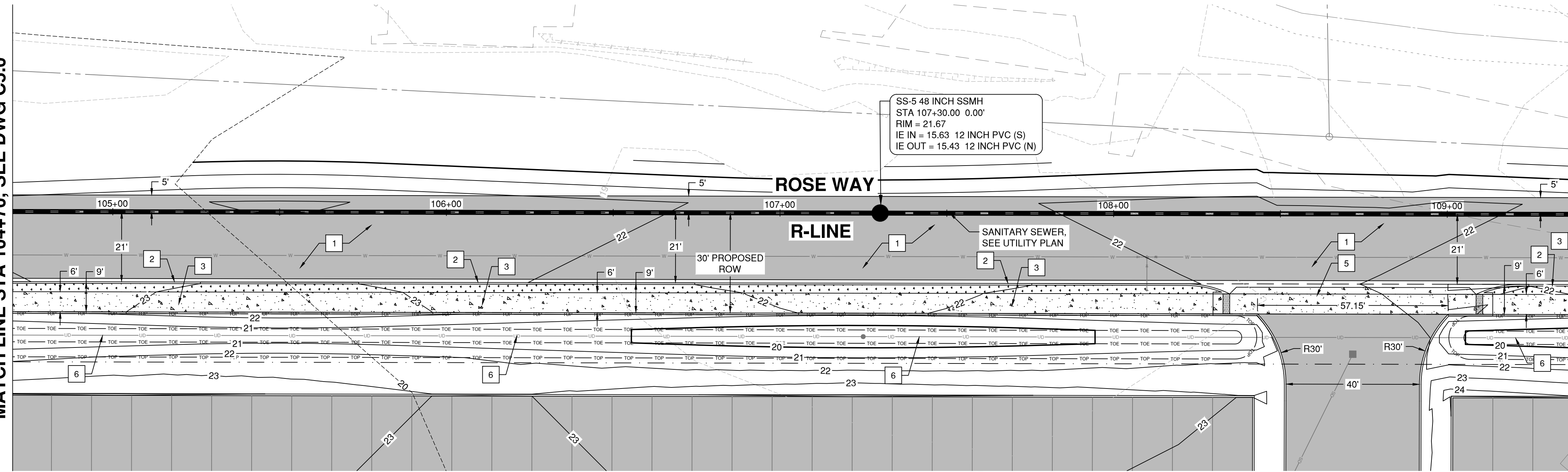
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C5.0

Sheet Number:
14 of 24

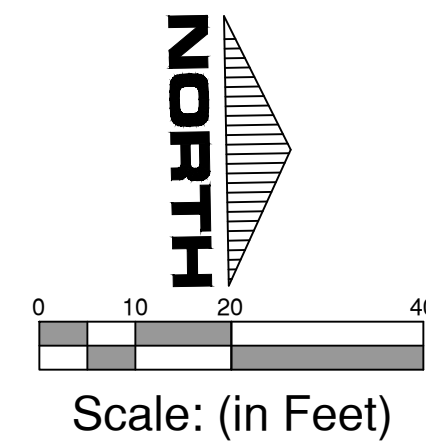
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MATCH LINE STA 104+70, SEE DWG C5.0

MATCH LINE STA 109+40, SEE DWG C5.2



SEE SITE PLAN FOR ON-SITE IMPROVEMENTS



LEGEND:

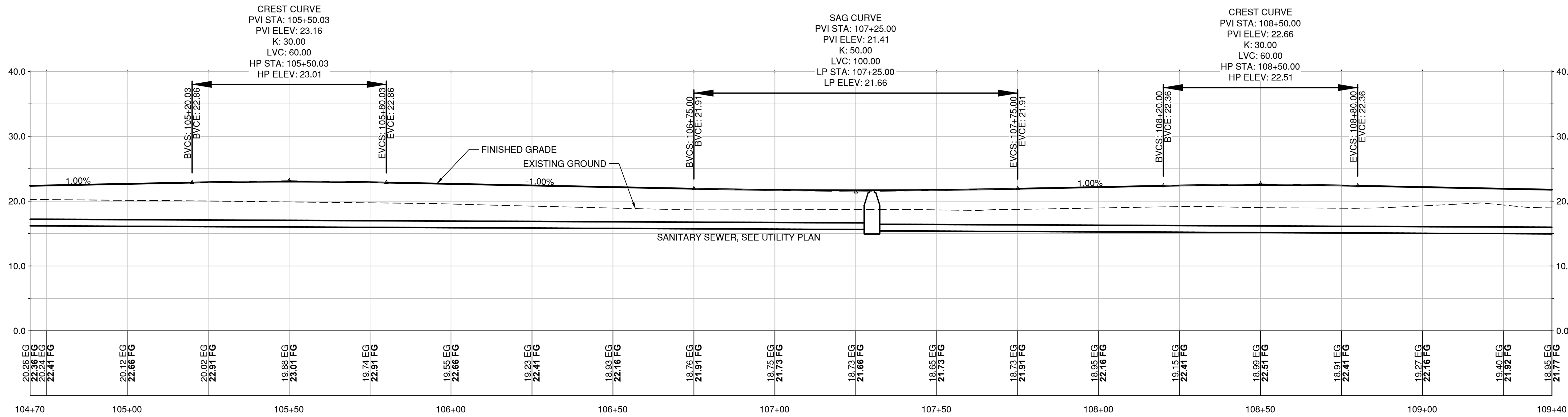
- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- LANDSCAPING

GENERAL SITE NOTES:

1. WITHIN ALL AREAS THAT HAVE BEEN SUBJECT TO CLEARING AND GRADING, ALL GRASS AND LANDSCAPED AREAS SHALL HAVE A MINIMUM 8-INCH SETTLED TOPSOIL LAYER PRIOR TO SEEDING AND PLANTING THAT MEETS THE CRITERIA PER BMP T5.13 IN THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL V.

SITE CONSTRUCTION NOTES:

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5. CONSTRUCT MAJOR COMMERCIAL DRIVEWAY PER COW STD T-06.
6. CONSTRUCT BIORETENTION SWALE PER GRADING AND STORM PLAN.
7. INSTALL TYPE 3 BARRICADE PER WSDOT STD PLAN K-80.20-00. BARRICADE TO SPAN WIDTH OF PAVEMENT.



Rose Way R-Line Profile

Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Rose Way Plan & Profile
 Sta 104+70 to Sta 109+40

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**

Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

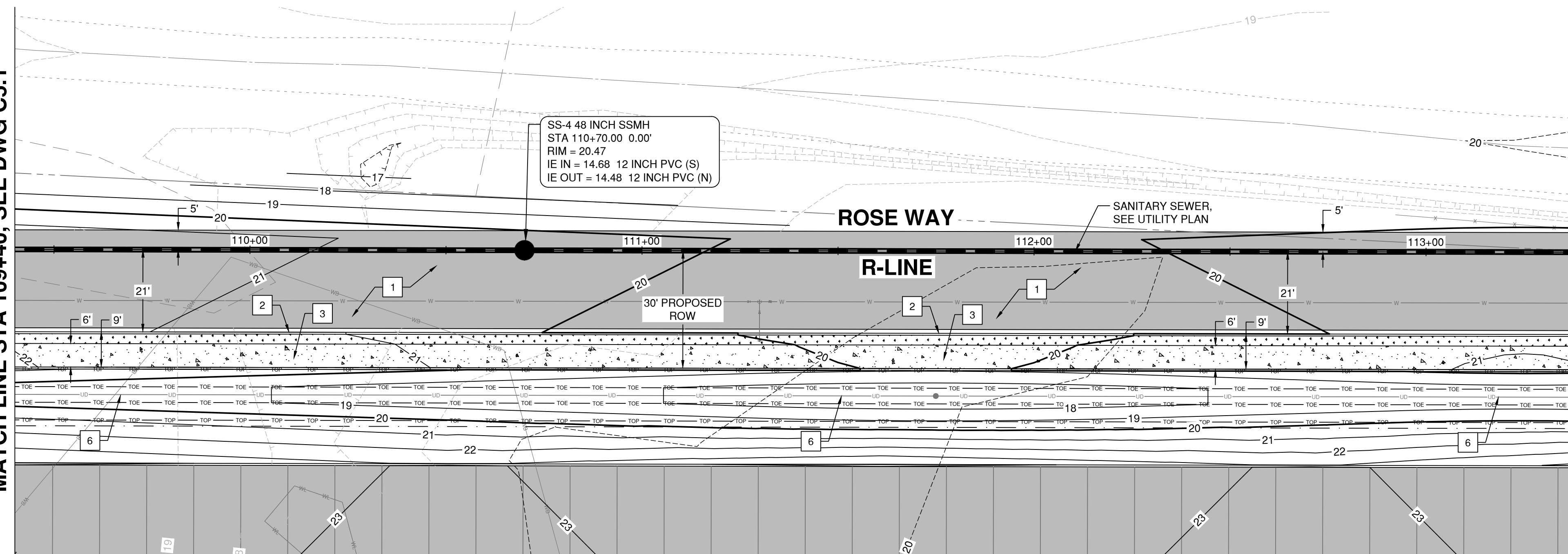
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Sheet Number:
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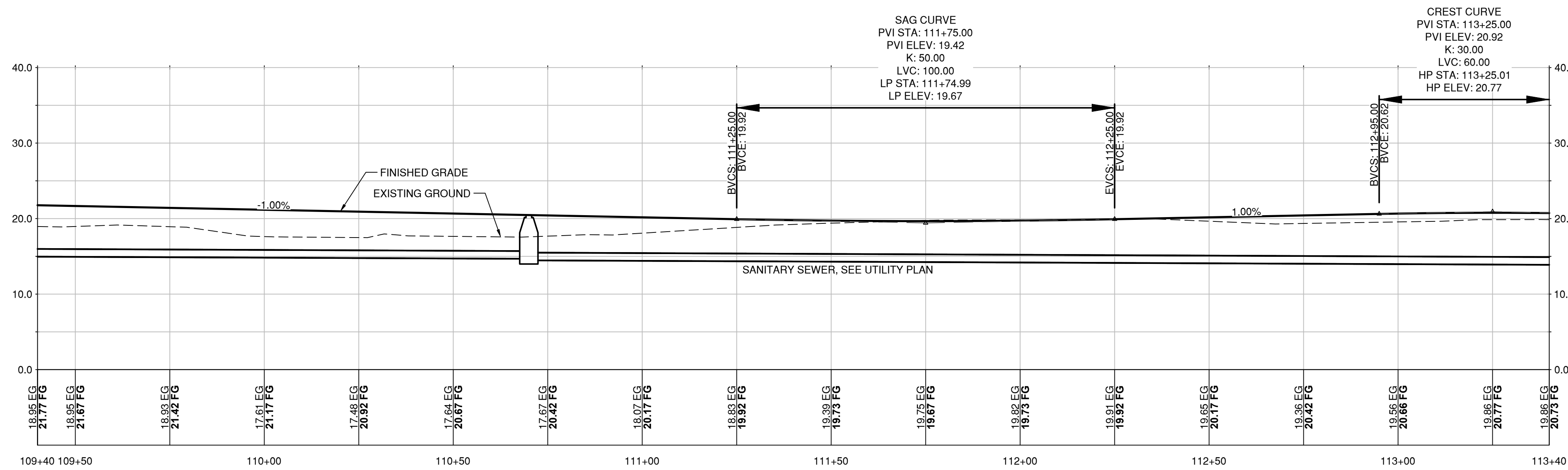
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MATCH LINE STA 109+40, SEE DWG C5.1

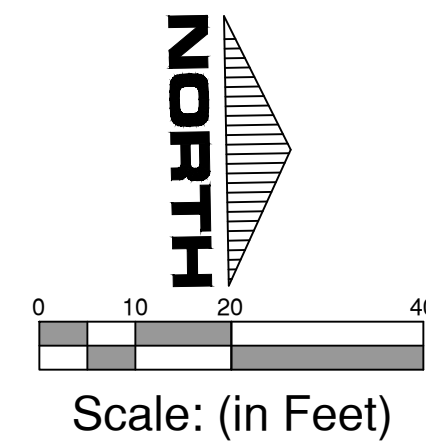
MATCH LINE STA 113+40, SEE DWG C5.3



SEE SITE PLAN FOR ON-SITE IMPROVEMENTS



Rose Way R-Line Profile
 Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'



LEGEND:

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- LANDSCAPING

GENERAL SITE NOTES:

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SITE CONSTRUCTION NOTES:

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3. CONSTRUCT SIDEWALK PER COW STD T-07.
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5. CONSTRUCT MAJOR COMMERCIAL DRIVEWAY PER COW STD T-06.
6. CONSTRUCT BIORETENTION SWALE PER GRADING AND STORM PLAN.
7. INSTALL TYPE 3 BARRICADE PER WSDOT STD PLAN K-80.20-00. BARRICADE TO SPAN WIDTH OF PAVEMENT.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Rose Way Plan & Profile
 Sta 109+40 to Sta 114+10

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**

Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

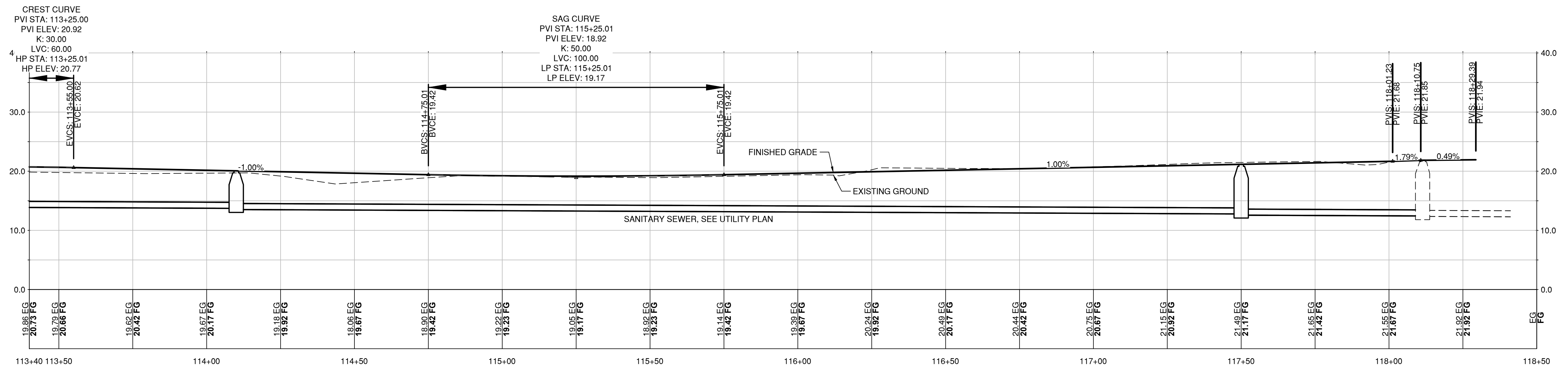
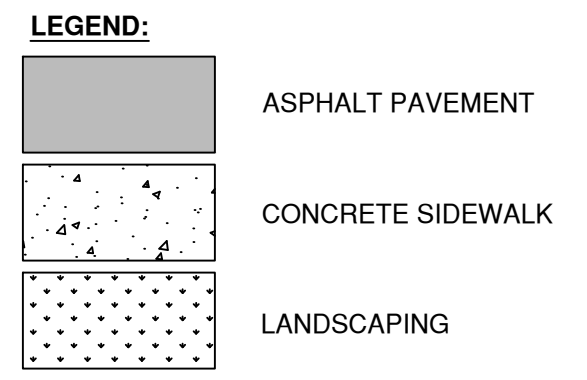
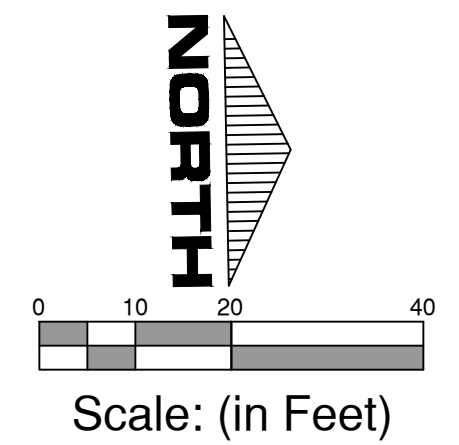
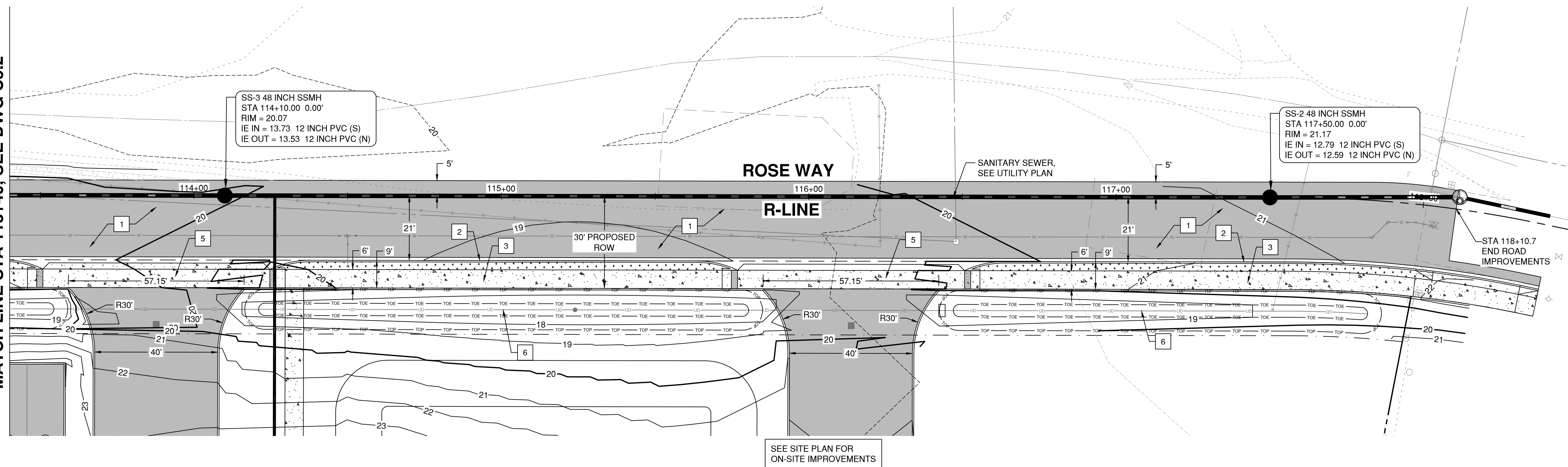
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Drawing Number:
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Sheet Number:
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MATCH LINE STA 113+40, SEE DWG C5.2



Rose Way R-Line Profile
 Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'

GENERAL SITE NOTES:

1. WITHIN ALL AREAS THAT HAVE BEEN SUBJECT TO CLEARING AND GRADING, ALL GRASS AND LANDSCAPED AREAS SHALL HAVE A MINIMUM 8-INCH SETTLED TOPSOIL LAYER PRIOR TO SEEDING AND PLANTING THAT MEETS THE CRITERIA PER BMP 15.13 IN THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL V.

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5. CONSTRUCT MAJOR COMMERCIAL DRIVEWAY PER COW STD T-06.
6. CONSTRUCT BIORETENTION SWALE PER GRADING AND STORM PLAN.
7. INSTALL TYPE 3 BARRICADE PER WSDOT STD PLAN K-80.20-00. BARRICADE TO SPAN WIDTH OF PAVEMENT.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Rose Way Plan & Profile
 Sta 114+10 to Sta 118+50

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: **60%**
 Date: **11-29-2023**



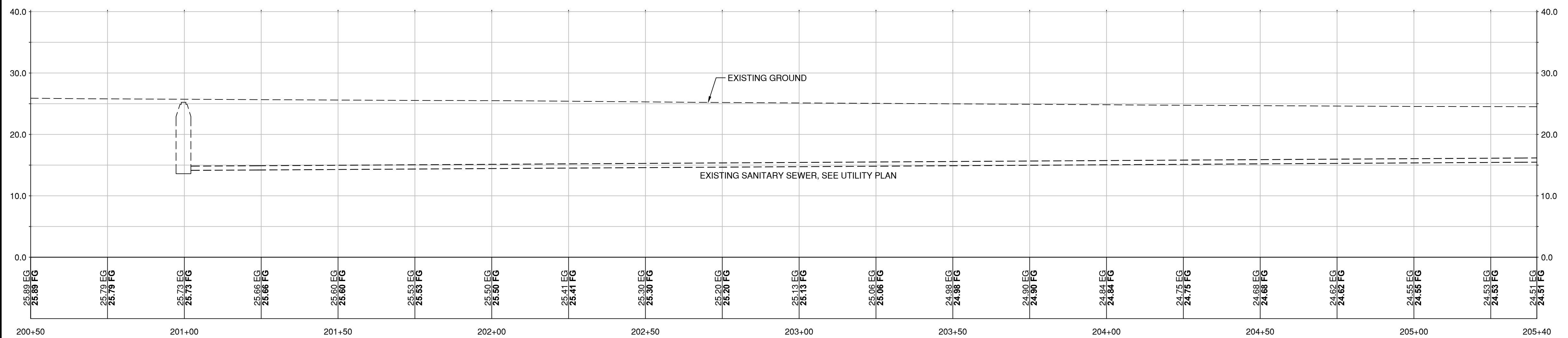
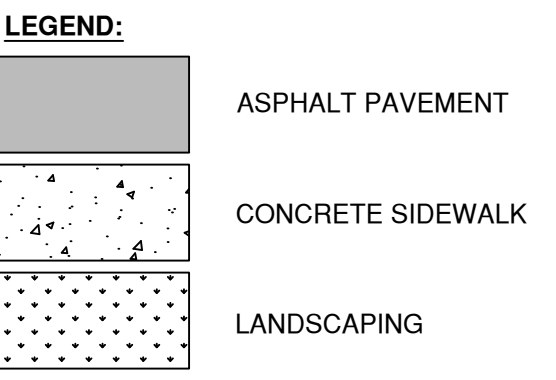
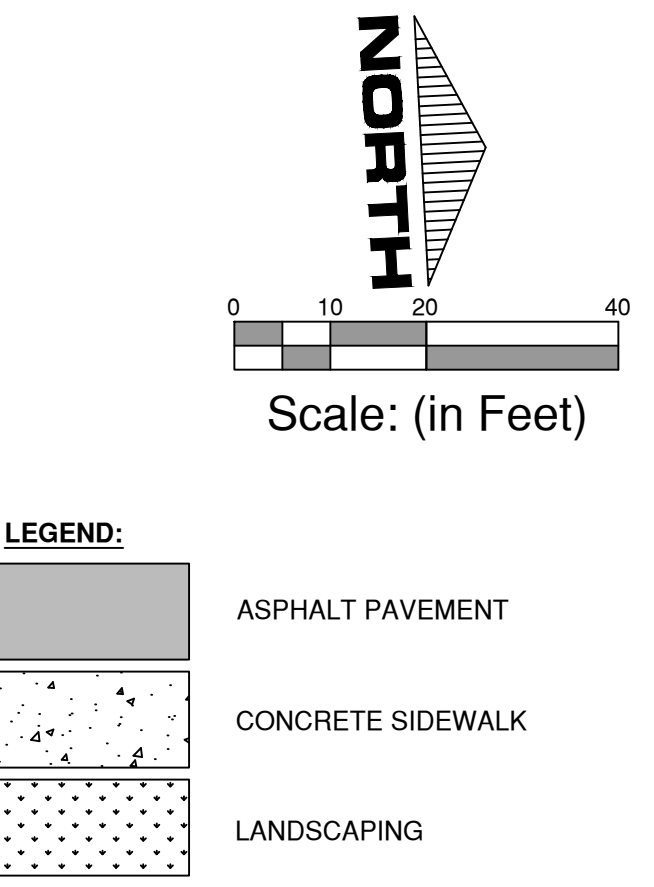
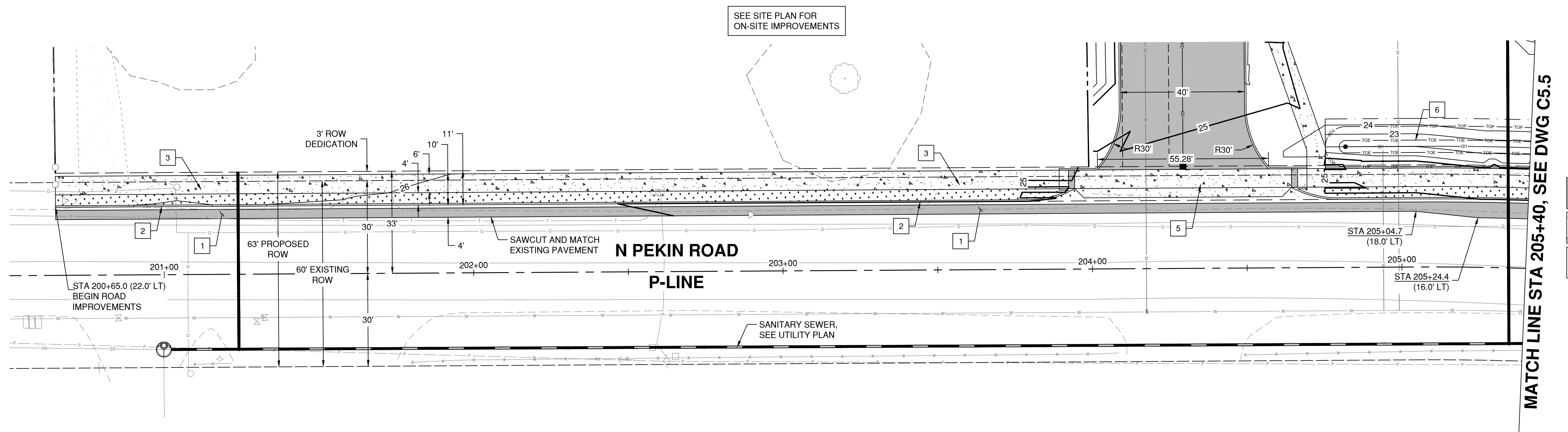
Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

Drawing Number:
C5.3

Sheet Number:
17 of 24

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N Pekin Road P-Line Profile
 Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'

GENERAL SITE NOTES:

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SITE CONSTRUCTION NOTES:

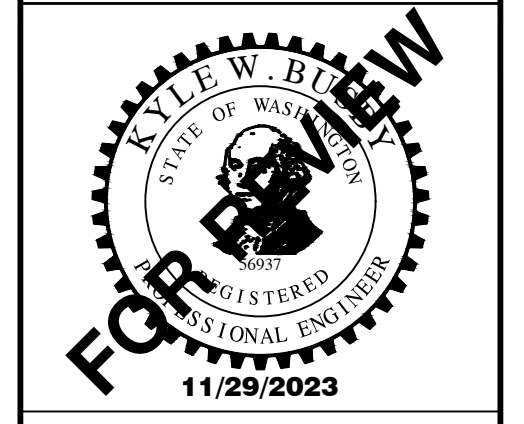
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2. CONSTRUCT TYPE A-1 CURB AND GUTTER PER COW STD T-01.
3. CONSTRUCT SIDEWALK PER COW STD T-07.
4. CONSTRUCT DRIVEWAY WITH DETACHED SIDEWALK PER COW STD T-03.
5. CONSTRUCT MAJOR COMMERCIAL DRIVEWAY PER COW STD T-06.
6. CONSTRUCT BIORETENTION SWALE PER GRADING AND STORM PLAN.



TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Pekin Road Plan & Profile
 Sta 200+50 to Sta 205+40

Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**
 Date: **11-29-2023**



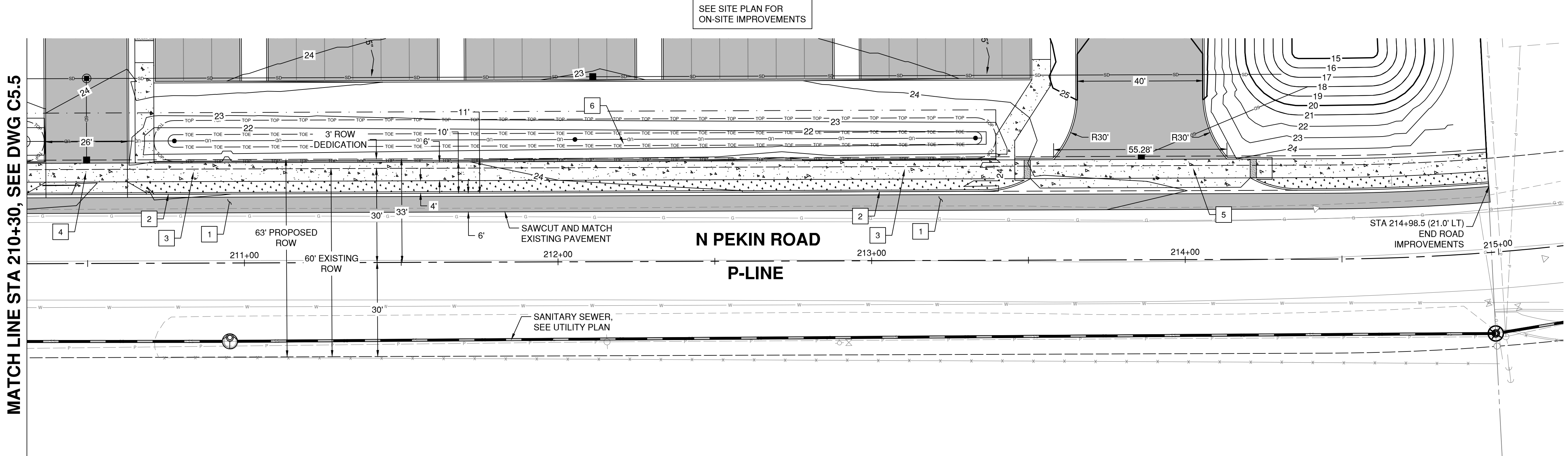
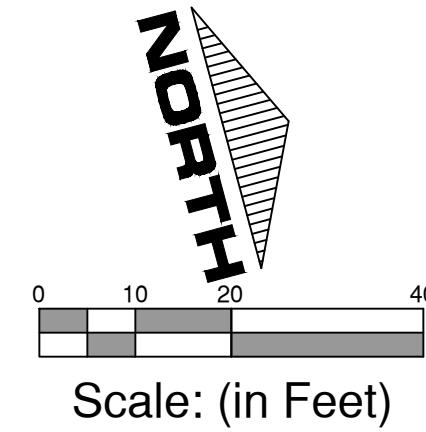
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 Checked by: **CLR**
 Approved by: **KWB**

Project Number:
0788.0259

Drawing Number:
C5.4

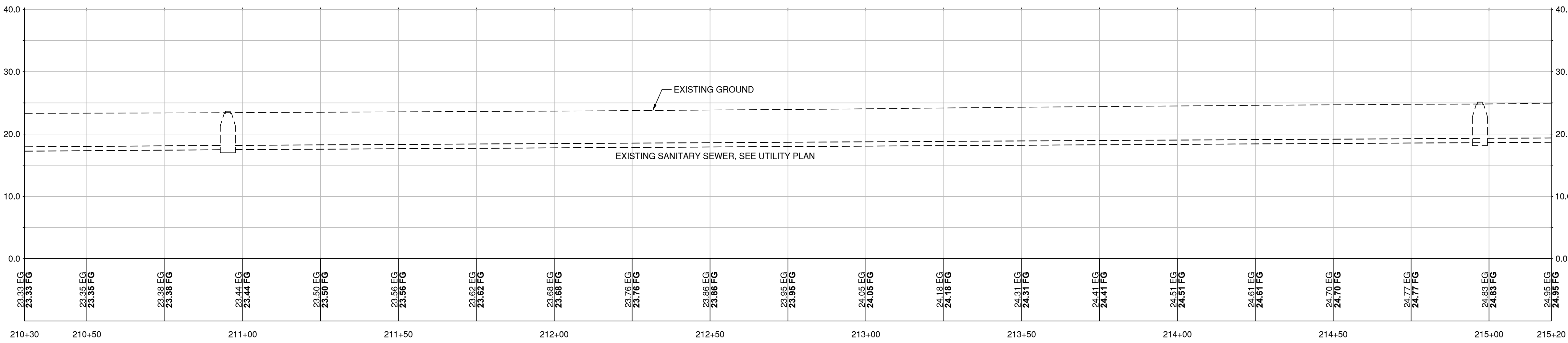
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LEGEND:

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- LANDSCAPING



N Pekin Road P-Line Profile
 Horiz Scale: 1" = 20'
 Vert Scale: 1" = 10'

GENERAL SITE NOTES:

- WITHIN ALL AREAS THAT HAVE BEEN SUBJECT TO CLEARING AND GRADING, ALL GRASS AND LANDSCAPED AREAS SHALL HAVE A MINIMUM 8-INCH SETTLED TOPSOIL LAYER PRIOR TO SEEDING AND PLANTING THAT MEETS THE CRITERIA PER BMP T5.13 IN THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL V.

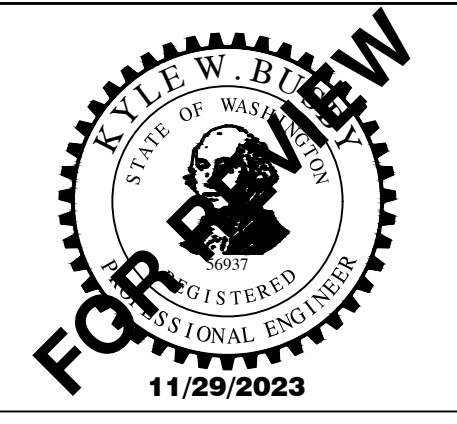
SITE CONSTRUCTION NOTES:

- SAWCUT EXISTING PAVEMENT AND WIDEN N PEKIN ROAD PER COW STD T-30 AND PER TYPICAL SECTION DETAIL 2 ON SHEET C5.7.
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TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
 Woodland, Washington
 Pekin Road Plan & Profile
 Sta 210+30 to Sta 215+20

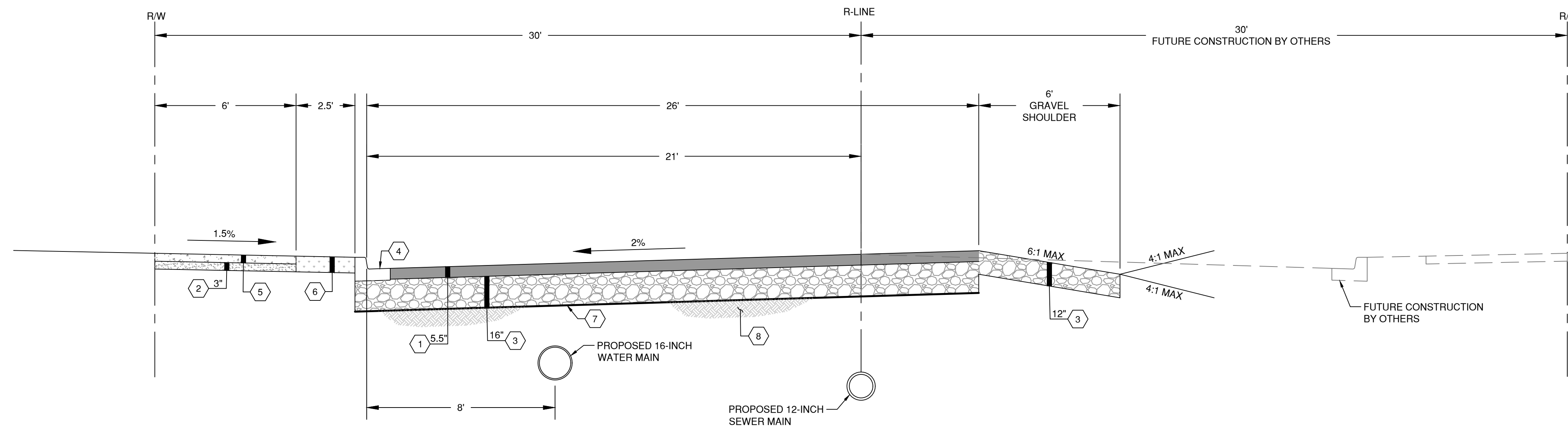
Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B

Project Milestone: **60%**
 Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**

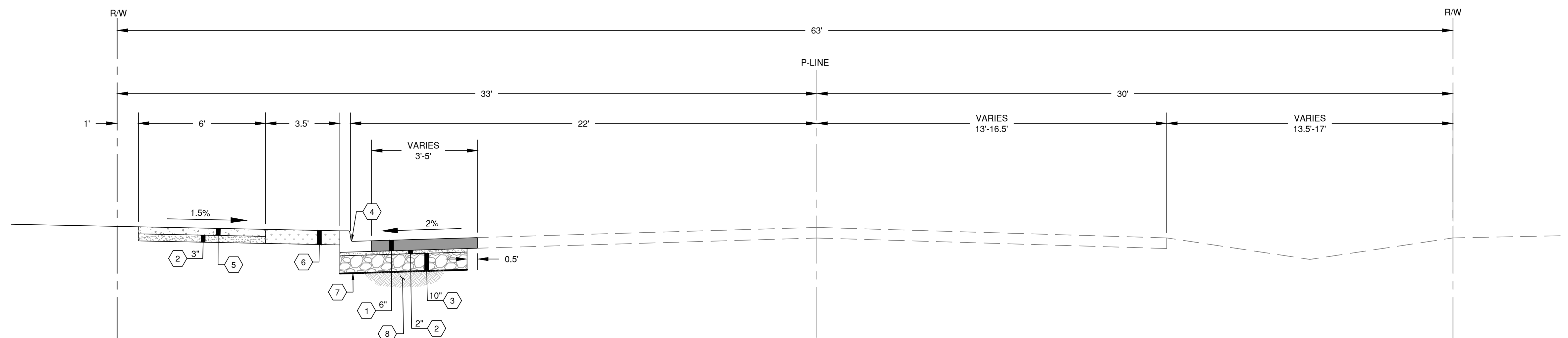
Project Number:
0788.0259
 Drawing Number:
C5.6
 Sheet Number:
20 of **24**



1 Typical Road Section - Rose Way
Scale: 1" = 3'

CONSTRUCTION NOTES:

- 1 HMA CL 1/2 IN PG 58H-22
- 2 CRUSHED SURFACING TOP COURSE
- 3 CRUSHED SURFACING BASE COURSE
- 4 CEMENT CONC TRAFFIC CURB AND GUTTER TYPE A-1 PER WOODLAND STD PLAN T-01
- 5 CEMENT CONCRETE SIDEWALK PER WOODLAND STD PLAN T-07
- 6 SEEDING, FERTILIZING, AND MULCHING OVER 8" TOPSOIL TYPE A AMENDED WITH FINE COMPOST
- 7 NONWOVEN CONSTRUCTION GEOTEXTILE FOR SEPARATION
- 8 COMPACTED SUBGRADE 95% OF MAX DRY DENSITY PER WSDOT METHOD B OF SPEC 2-03.3(14)C



2 Typical Road Section - Pekin Road
Scale: 1" = 3'

TCC Woodland Industrial Project
Trammell Crow Portland Dev, Inc.
Woodland, Washington
Typical Road Sections

Datum: NAD83 / NAVD 88
Survey Book: 1900, 1900 A & B

Project Milestone: **60%**

Date: **11-29-2023**



Designed by: **KWB**
Checked by: **CLR**
Approved by: **KWB**

Project Number:
0788.0259

Drawing Number:
C5.7

Sheet Number:
21 of **24**

CONCRETE CURBS

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-01
PUBLIC WORKS DIRECTOR	DATE				

DRIVEWAY WITH DETACHED SIDEWALK

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-03
PUBLIC WORKS DIRECTOR	DATE				

MAJOR COMMERCIAL DRIVEWAY

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-06
PUBLIC WORKS DIRECTOR	DATE				

SIDEWALK DETAIL

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-07
PUBLIC WORKS DIRECTOR	DATE				

PARALLEL RAMP

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-16
PUBLIC WORKS DIRECTOR	DATE				

PERPENDICULAR RAMP

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-17
PUBLIC WORKS DIRECTOR	DATE				

STANDARD LANDING CROSS SECTION A-A

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-19
PUBLIC WORKS DIRECTOR	DATE				

STANDARD LANDING CROSS SECTIONS C-C AND D-D

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED	T-20
PUBLIC WORKS DIRECTOR	DATE				

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	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

NOTES:

- DETECTABLE WARNINGS SHALL BE MANUFACTURED USING THE MATERIALS SPECIFIED ON THE PLAN SHEETS WITH THE SAME DIMENSIONS AND SPACING SHOWN AND INSTALLED PER THE MANUFACTURER'S RECOMMENDED PROCEDURES.
- DETECTABLE WARNINGS SHALL BE INSET INTO NEW CONCRETE WITH NO AIR TRAPPED UNDERNEATH. GLUED ON OR NAILED DOWN PRODUCTS ARE NOT ACCEPTABLE FOR NEW CONSTRUCTION.
- SAFETY YELLOW TRUNCATED DOMES ARE REQUIRED UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.

CONCRETE CURBS DETAIL T-01

RAMP LIP DETAIL

DETECTABLE WARNING PATTERN DETAIL

APPROVED [Signature] DATE 11/10/23

T-21

UTILITY PLACEMENT

NOTES:

- THE PUBLIC WORKS DIRECTOR MAY REQUIRE INSTALLATION OF SANITARY SEWER AT A DEPTH GREATER THAN 6 FEET.
- ALTERNATE LOCATIONS CONSIDERED ONLY TO SALVAGE CORE ROADWAY, OR TO AVOID SUBSTANTIAL CONFLICT WITH EXISTING UTILITIES.
- MANHOLES CONES TO BE ROTATED TO KEEP MANHOLE COVER LOCATED OUTSIDE OF WHEEL PATH.
- GAS VALVES ARE TO BE LOCATED 2' MINIMUM FROM FACE OF CURB.
- MODIFICATION TO THIS STANDARD IS SUBJECT TO THE REVIEW AND APPROVAL OF THE PUBLIC WORKS DIRECTOR.
- PULL BOXES AND VAULTS OF PRIVATE UTILITIES WILL BE LOCATED OUTSIDE OF THE SIDEWALK.

APPROVED [Signature] DATE 11/10/23

T-22

COMMERCIAL/INDUSTRIAL COLLECTOR

CONVENTIONAL CONSTRUCTION				THICK ASPHALT CONSTRUCTION			
ASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS		ASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS	
A-1	0.45"	0.45"		A-1	0.52"	0.25"	
A-2	0.45"	0.45"		A-2	0.52"	0.25"	
A-3	0.45"	0.50"		A-3	0.55"	0.25"	
A-4	0.45"	0.50"		A-4	0.62"	0.25"	
A-5	0.45"	1.15"		A-5	0.72"	0.25"	
A-6	0.45"	1.55"		A-6	0.82"	0.25"	
A-7	0.50"	2.00"		A-7	1.00"	0.25"	
OTHER	NO SECTION ESTIMATED			OTHER	NO SECTION ESTIMATED		

NOTES:

- WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
- SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
- ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 58H-22 PER WSDOT STANDARD SPECIFICATIONS.
- THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
- EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
- BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8" - 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(4)(3).
- IF EX. ASPHALT THICKNESS IS GREATER THAN THE RESTORATION THICKNESS SPECIFIED IN THE CONVENTIONAL OR THICK ASPHALT CONSTRUCTION TABLES ABOVE, ASPHALT SHALL BE INSTALLED TO MATCH THE EX. THICKNESS.

APPROVED [Signature] DATE 11-17-23

T-25A

PAVEMENT RESTORATION/WIDENING AT CURBS

TYPE A-1 CURB AND GUTTER

NOTES:

- SEE CONCRETE CURBS DETAIL T-01 FOR CURBS.
- PAVEMENT SECTION SHALL BE APPROVED IN ADVANCE AND COMPLETED TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR.
- THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER THE STANDARD SPECIFICATIONS. ALL JOINTS SHALL BE SEALED WITH CRS-1 AND SANDED.
- COMPACT SUBGRADE, CRUSHED AGGREGATE AND PAVEMENT TO 95% OF MAXIMUM DRY DENSITY.
- HOT MIX ASPHALT SHALL BE (HMA) CLASS 1/2" PG 58H-22 3 TO 30 ESAL MIX DESIGN. MINIMUM LIFT THICKNESS IS 0.15' MAXIMUM LIFT THICKNESS IS 0.35' FOR BASE COURSE AND 0.25' FOR SURFACE COURSE.
- MATCH EXISTING PAVEMENT SLOPE. NO STEEPER THAN 4% WITHOUT SPECIFIC CITY APPROVAL.
- SAWCUT AND REMOVE EXISTING FAILING ASPHALT PAVEMENT.
- SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT, MINIMUM 6" WIDTH, MAXIMUM HALF STREET WIDTH.
- 3' MIN. PAVEMENT RESTORATION AROUND MANHOLE.

APPROVED [Signature] DATE 11/17/23

T-30

CONCRETE JOINTS

NOTES:

- CONTRACTION JOINTS MAY BE USED IN PLACE OF SURFACE JOINTS.
- CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
- CONCRETE PAVEMENT LOAD TRANSFER REQUIREMENTS ACROSS JOINTS SHALL BE DETERMINED BY PCC PAVEMENT DESIGN.
- PARALLEL JOINTS SHALL BE SEPARATED BY A MINIMUM OF 2'.

APPROVED [Signature] DATE 11/10/23

T-31

STANDARD TRENCH RESTORATION NOTES

GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT WHERE OTHERWISE NOTED IN THESE STANDARDS. MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND SHALL COMPLY WITH THE CURRENT EDITION.
- TRENCH BACKFILL AND RESURFACING SHALL BE AS SHOWN IN THE STANDARD DETAILS, UNLESS MODIFIED BY THE RIGHT OF WAY USE PERMIT. SURFACING DEPTHS AND PAVING LIMITS SHOWN IN THE STANDARD DETAILS ARE MINIMUMS AND MAY BE INCREASED BY THE DIRECTOR TO MEET TRAFFIC LOADINGS OR SITE CONDITIONS.
- THE DIRECTOR MAY REQUIRE MATERIALS COMPACTION AND MOISTURE TESTING. TESTING SHALL BE PERFORMED BY A LAB PRE APPROVED BY THE CITY WITH THE RESULTS BEING SUPPLIED TO THE DIRECTOR. THE TESTING IS NOT INTENDED TO RELIEVE THE CONTRACTOR FROM ANY LIABILITY FOR THE TRENCH RESTORATION. IT IS INTENDED TO SHOW THE INSPECTOR AND THE CITY THAT THE RESTORATION MEETS THIS SPECIFICATION.
- THE FINAL PAVEMENT PATCH SHALL BE COMPLETED AS SOON AS POSSIBLE AND SHALL BE COMPLETED WITHIN THIRTY (30) DAYS AFTER FIRST OPENING THE TRENCH. THIS TIME FRAME MAY BE ADJUSTED IF DELAYS ARE DUE TO INCLEMENT WEATHER, OR OTHER ADVERSE CONDITIONS. HOWEVER, DELAYING OF FINAL PATCH OR OVERLAY WORK IS ALLOWABLE ONLY SUBJECT TO THE DIRECTOR'S APPROVAL. THE DIRECTOR MAY DEEM IT NECESSARY TO COMPLETE THE WORK WITHIN THIRTY (30) DAYS TIME FRAME AND NOT ALLOW ANY TIME EXTENSION. IF THIS OCCURS, THE CONTRACTOR SHALL PERFORM THE NECESSARY WORK AS DIRECTED. PATCHES, REPAIRS, OR OVERLAYS SHALL ONLY BE INSTALLED NEXT TO A CLEAN, NEAT SAWCUT LINE.
- WHEN TRENCHING WITHIN THE ROADWAY SHOULDERS, THE SHOULDER SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION. LONGITUDINAL TRENCH RESTORATION REQUIRING A HALF LANE WIDTH OR MORE SHALL BE REQUIRED TO RESTORE THE ENTIRE LANE TO CENTERLINE. UNDERMINED PAVEMENT SHALL BE CUT BACK, REMOVED, AND RESTORED TO LIMITS AS REQUIRED BY THE DIRECTOR TO ALLOW COMPACTION AND BACKFILL OF DISTURBED AREAS. LIMITS OF TRENCH RESTORATION SHALL BE IDENTIFIED PRIOR TO TRENCH BACKFILL.
- ANY PATCH OR OVERLAY ON ARTERIAL STREETS OR AREAS ZONED COMMERCIAL SHALL BE PERMANENT AND COMPLETED AS SOON AS POSSIBLE.
- IF A PAVEMENT CUT IS PROPOSED IN A STREET THAT WAS CONSTRUCTED OR RE-PAVED WITHIN THE PAST FIVE YEARS, A DISRUPTION FEE WILL BE CHARGED IN ACCORDANCE WITH WMC 12.04.060. TRENCHLESS CONSTRUCTION METHODS MUST BE EXPLORED ON ALL PAVED ROAD CROSSINGS REGARDLESS OF THE PAVEMENT CONDITION.
- CONTROL DENSITY FILL IS REQUIRED WHEN TRENCHING IN ARTERIAL STREETS, AND STREETS LOCATED IN THE CENTRAL BUSINESS DISTRICT. FOR LONGITUDINAL TRENCHES ALTERNATIVE METHODS OF RESTORATION MAY BE CONSIDERED.
- THE OWNER SHALL WARRANTY THE RESTORATION WORK FOR A PERIOD OF 2 YEARS ON RESIDENTIAL, LOCAL, AND UNCLASSIFIED STREETS AND 5 YEARS ON COLLECTOR AND ARTERIAL STREETS. FRANCHISE UTILITIES SHALL WARRANTY THEIR WORK FOR THE LIFE OF THE RESTORATION. THE OWNER SHALL REPAIR ANY OF THE FOLLOWING DEFICIENCIES WHICH OCCUR DURING THIS TIME PERIOD.
 - SETTLEMENT OR BUMP: ANY SETTLEMENT OR BUMP MORE THAN 1/4 INCH LOWER OR HIGHER THAN THE ORIGINAL PAVEMENT SHALL BE REPAIRED. REPAIR MAY INCLUDE REMOVAL AND REPLACEMENT OR SKIN PATCHING AND WILL BE DETERMINED BY THE DIRECTOR.
 - EDGE SEPARATION: ANY SEPARATION OF THE TRENCH FROM SURROUNDING ROADWAY GREATER THAN 1/4 INCH SHALL BE CRACK SEALED PER WSDOT STANDARD SPECIFICATIONS SECTION 5-04.
 - ALLIGATOR CRACKING: ANY TRENCH PAVEMENT WHICH EXHIBITS ALLIGATOR CRACKING SHALL BE REPLACED. THE REPLACEMENT SHALL BE IN CONFORMANCE WITH THE PAVEMENT REPAIR SECTION OF THE STANDARD SPECIFICATIONS.
 - RAVELING: RAVELING IS DEFINED AS SURFACE DETERIORATION THAT OCCURS WHEN AGGREGATE PARTICLES ARE DISLOADED OR OXIDATION CAUSES LOSS OF ASPHALT BINDER. THE ASPHALT CONCRETE PAVEMENT LOSES ITS SMOOTH SURFACE AND BEGINS TO APPEAR VERY OPEN AND ROUGH. MEDIUM SEVERITY RAVELING AS DEFINED BY THE PAVEMENT SURFACE CONDITION FIELD RATING MANUAL FOR ASPHALT PAVEMENT DEVELOPED BY THE NORTHWEST PAVEMENT MANAGEMENT ASSOCIATION SHALL BE PLANNED AND REPAVED.
- PAVEMENT REMOVAL SHALL ONLY BE ACCOMPLISHED BY USE OF SAWCUTTING, PLANING, OR GRINDING EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PURPOSE. TO ACCOMPLISH A NEAT STRAIGHT CUT LINE. USE OF PAVEMENT RIPPER IS PROHIBITED.
- ALL PAVEMENT, CURB, GUTTER, OR SIDEWALK DAMAGED AS A RESULT OF CONTRACTOR ACTIVITY SHALL BE RESTORED TO ORIGINAL CONDITION. PAVEMENT SHALL BE RESTORED TO NOT LESS THAN THE ORIGINAL CROSS SECTION AND STRENGTH. WHERE PAVEMENT, CURB, GUTTER, OR SIDEWALK HAVE BEEN UNDERMINED BY TRENCHING, IT SHALL BE REMOVED. THE SUBGRADE RESTORED AND SURFACES REPLACED TO LIMITS AS APPROVED BY THE CITY.

APPROVED [Signature] DATE 11/10/23

T-32

STANDARD TRENCH RESTORATION

NOTES:

- PIPE BEDDING AND TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY, PER ASTM D1557 IN 6-INCH MAX LIFTS.
- MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE PER WSDOT STD. SPECIFICATIONS, AS MENED BY THE CITY STANDARDS.
- THE EXISTING ROAD SURFACE SHALL BE CUT IN A NEAT LINE PRIOR TO PAVEMENT REPLACEMENT BY SAWCUTTING OR WHEEL CUTTER OR PLANING EQUIPMENT. THIS WILL BE REQUIRED AROUND THE PERIMETER OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES. THE CUT LINE SHALL BE ONE CONTINUOUS STRAIGHT LINE FROM THE OUTER EXCAVATION LIMITS OF MANHOLE, VALVE BOX, ETC. TO MANHOLE, VALVE BOX, ETC.
- EDGES OF EX. ASPHALT SHALL BE CLEANED WITH A TACK COAT APPLIED PER WSDOT STD. SPEC. SECTION 5-04.
- IF UTILITY IS INSTALLED WITHIN AREAS WHERE RESTORATION IS COMPRISED OF AGGREGATE OR GRASS, RESTORATION SHALL CONSIST OF:
 - FOR AGGREGATE RESTORATION:
 - 4-INCH DEPTH CRUSHED SURFACING TOP COURSE PER WSDOT STD. SPEC. SECTION 9-03.9(3).
 - FOR GRASS RESTORATION:
 - 4-INCH TOPSOIL
 - HYDROSEED APPROPRIATE FOR WESTERN WASHINGTON.

APPROVED [Signature] DATE 11-23

T-33

STANDARD PERPENDICULAR TRENCH RESTORATION

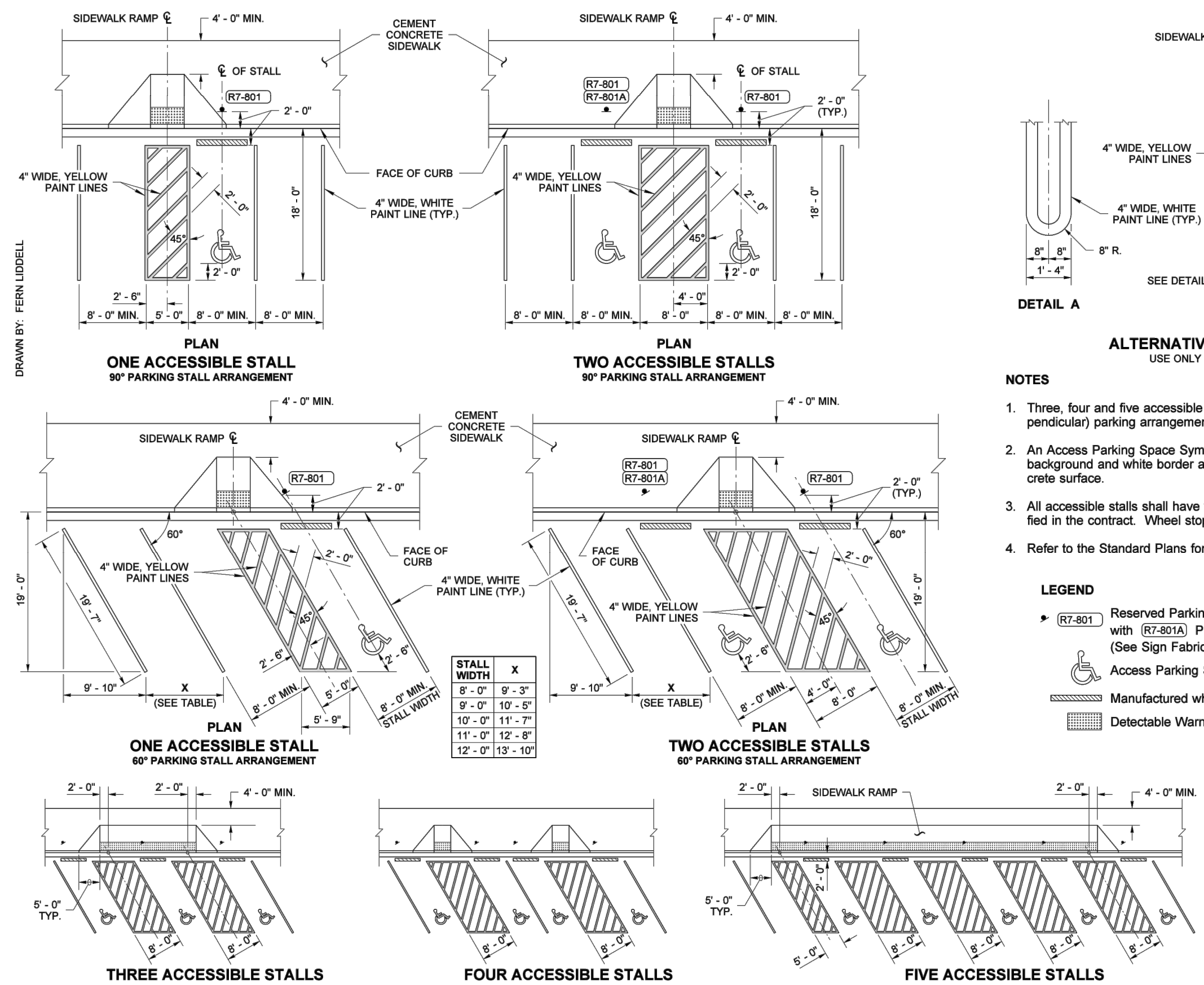
NOTES:

- EXISTING HOT MIX ASPHALT
- 2" GRIND & OVERLAY W/ HOT MIX ASPHALT CL. 1/2" PG 58H-22 (3 TO 30 ESAL MIX DESIGN) PER WSDOT STD. SPEC. HMA AND CSBC THICKNESS PER ROADWAY CLASSIFICATION. SEE STD. DETAILS T-23 THROUGH T-27 AND T-33.
- STANDARD TRENCH RESTORATION PER CITY STD DETAIL T-33.

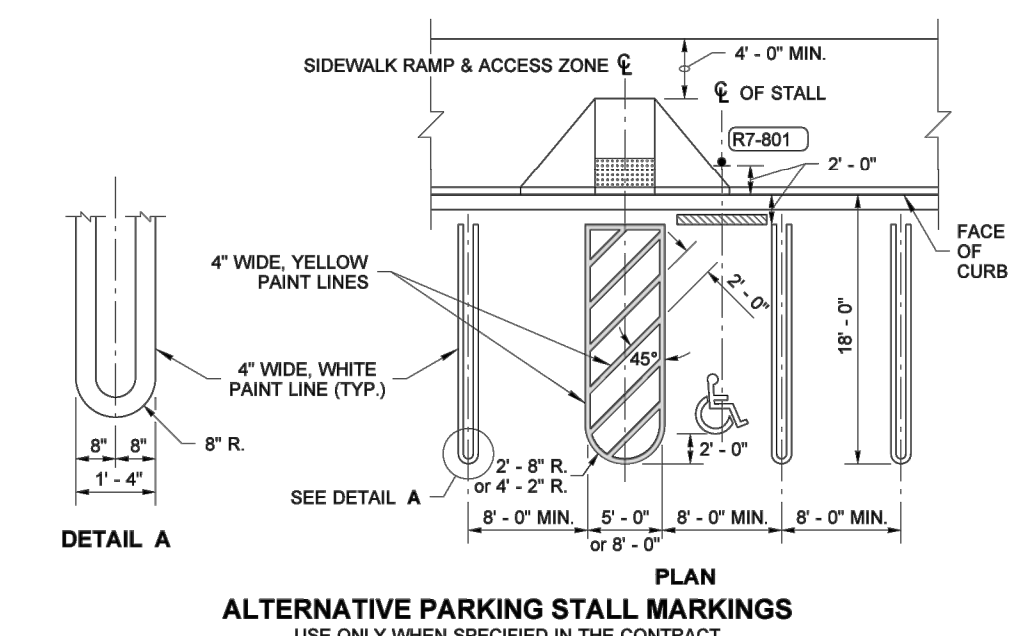
APPROVED [Signature] DATE 11-17-23

T-36

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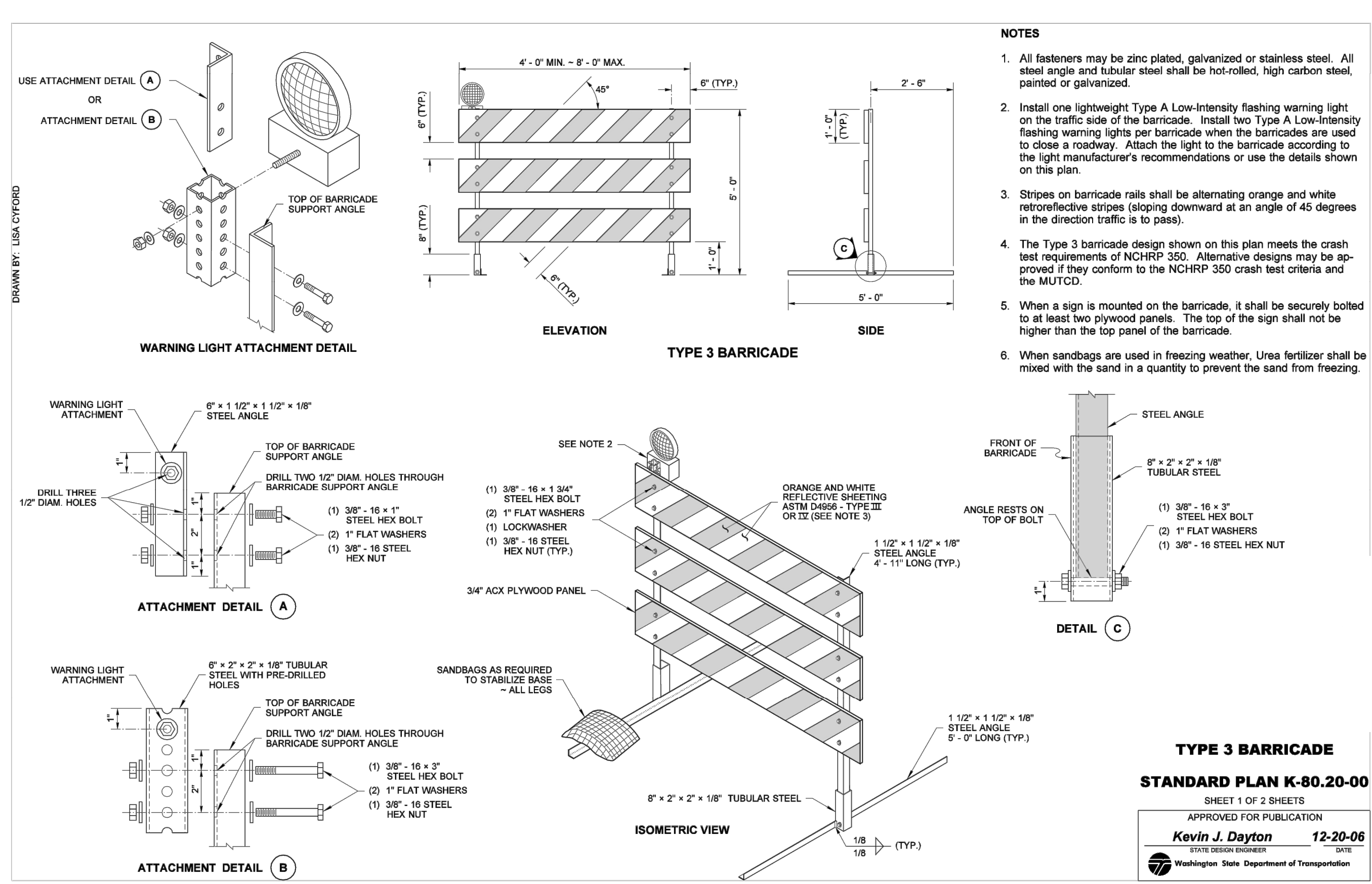


PARKING SPACE LAYOUTS
STANDARD PLAN M-17.10-02
 SHEET 1 OF 1 SHEET
 APPROVED FOR PUBLICATION
Pasco Bakotich III 07-03-08
 STATE DESIGN ENGINEER DATE
 Washington State Department of Transportation

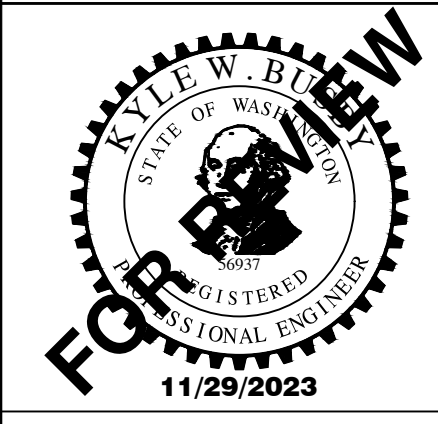


- NOTES**
- Three, four and five accessible stall arrangements may be either 60° (angled) or 90° (perpendicular) parking arrangements. See Contract.
 - An Access Parking Space Symbol is required for each accessible parking stall. A blue background and white border are required when the symbol is installed on a cement concrete surface.
 - All accessible stalls shall have wheel stops. Place wheel stops in other stalls when specified in the contract. Wheel stops shall be approximately 6" high and a minimum of 6' long.
 - Refer to the Standard Plans for sidewalk ramp, detectable warning pattern, and curb details.

- LEGEND**
- Reserved Parking Sign and post with (R7-801A) Plaque, if indicated (See Sign Fabrication Manual)
 - Access Parking Space Symbol
 - Manufactured wheel stop
 - Detectable Warning Pattern



Datum: NAD83 / NAVD 88
 Survey Book: 1900, 1900 A & B
 Project Milestone: **60%**
 Date: **11-29-2023**



Designed by: **KWB**
 Checked by: **CLR**
 Approved by: **KWB**
 Project Number:
0788.0259
 Drawing Number:
C5.10
 Sheet Number:
24 of 24



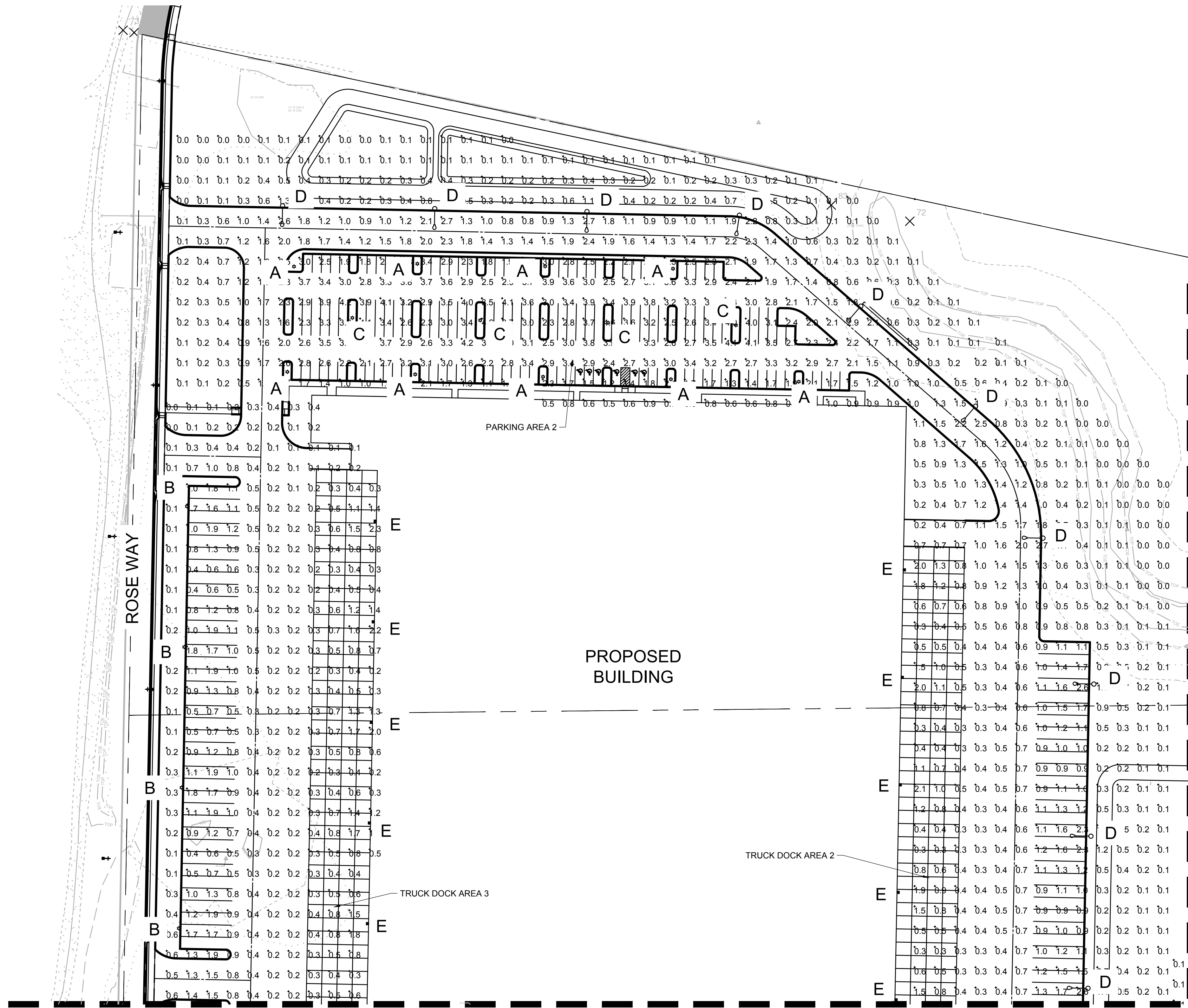
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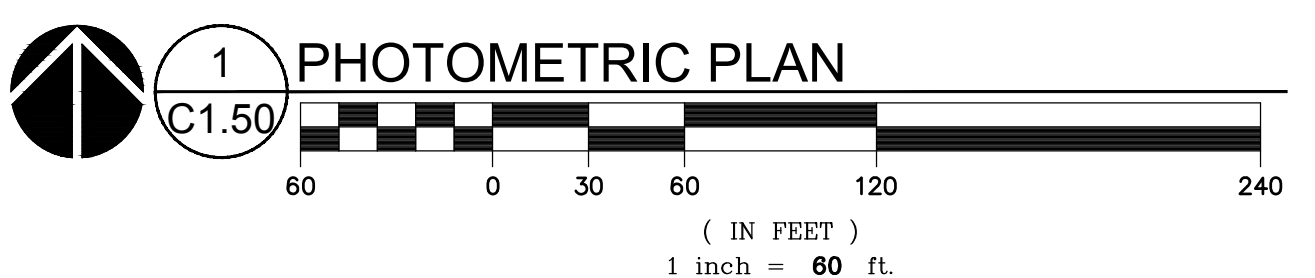
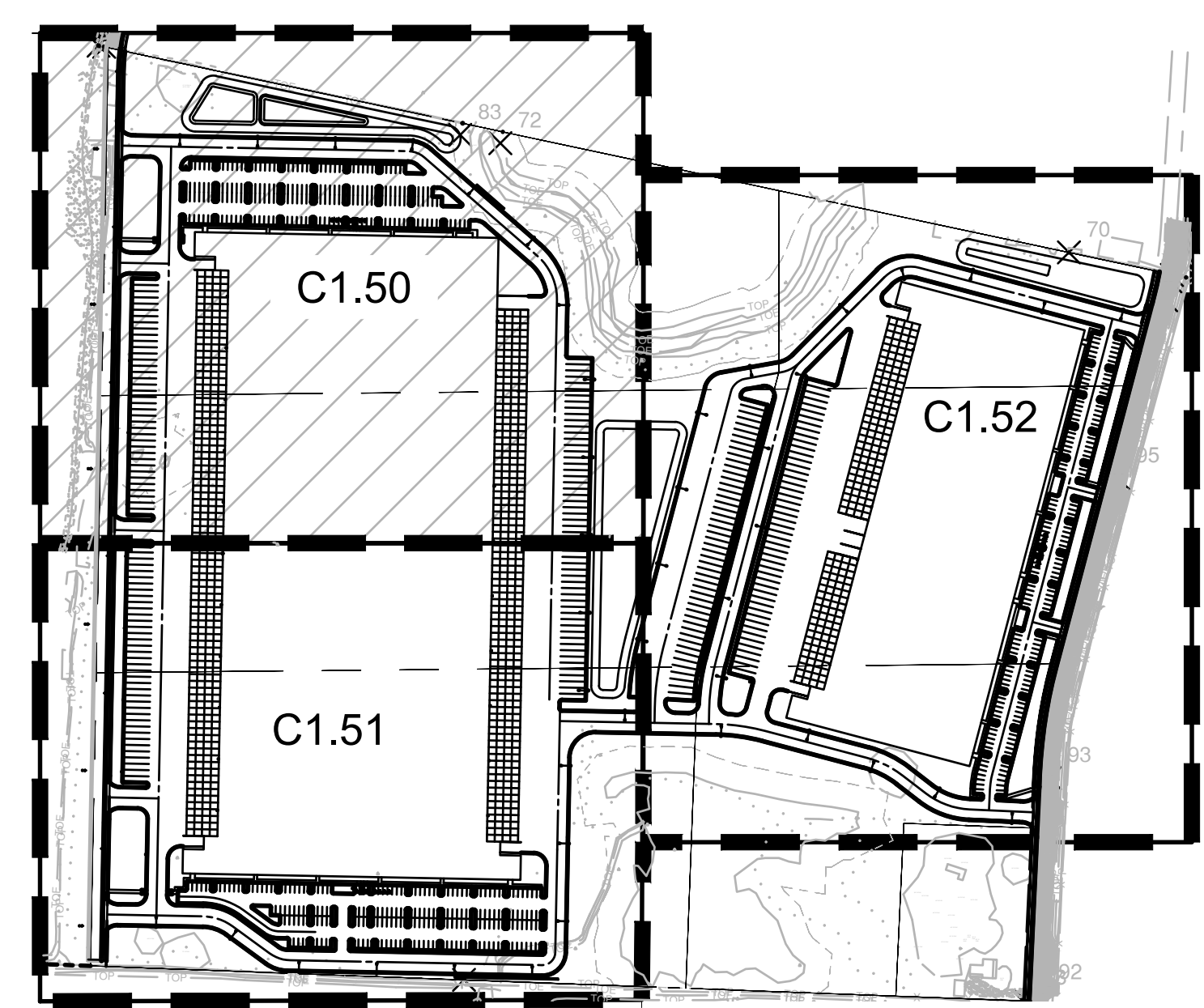
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LUMINAIRE SCHEDULE									
SYM	QTY	MANUFACTURER	CATALOG #	DISTRIBUTION	WATTS	VOLTAGE	HEIGHT	MA LENGTH	CONFIGURATION
A	25	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DD8CD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
B	15	LITHONIA LIGHTING	ESX1 LED P2 40K R3 HS MVOLT UPA BLS DD8CD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
C	8	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DD8CD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	TWIN
D	42	AMERICAN ELECTRIC LIGHTING	ATBO P305 R4 4K	AUTOBAHN LED COBRA HEAD FULL CUTOFF	145	UNIVERSAL (120-277 V)	30 FT	8 FT	COBRA HEAD
E	28	LITHONIA LIGHTING	TWR1 LED ALD-HIGH 40K UVOLT	TWR LED WALL PACK	58	UNIVERSAL (120-247 V)	30 FT	N/A	SINGLE

PHOTOMETRIC CALCULATIONS	
SITE AREA	AVERAGE (FC)
ACCESS LOOP	0.83
PARKING AREA 1	1.30
PARKING AREA 2	1.53
PARKING AREA 3	1.36
TRUCK DOCK AREA 1	0.65
TRUCK DOCK AREA 2	0.68
TRUCK DOCK AREA 3	0.58
TRUCK PARKING	0.74

MATCHLINE - SEE 1/C1.52



Project
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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
PHOTOMETRIC PLAN

SHEET:
C1.50
JOB NO. **2220334.00**





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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**PHOTOMETRIC
PLAN**

SHEET:

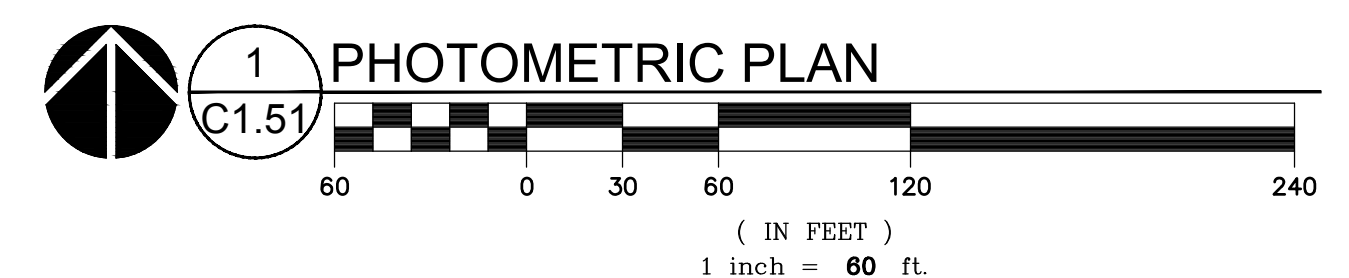
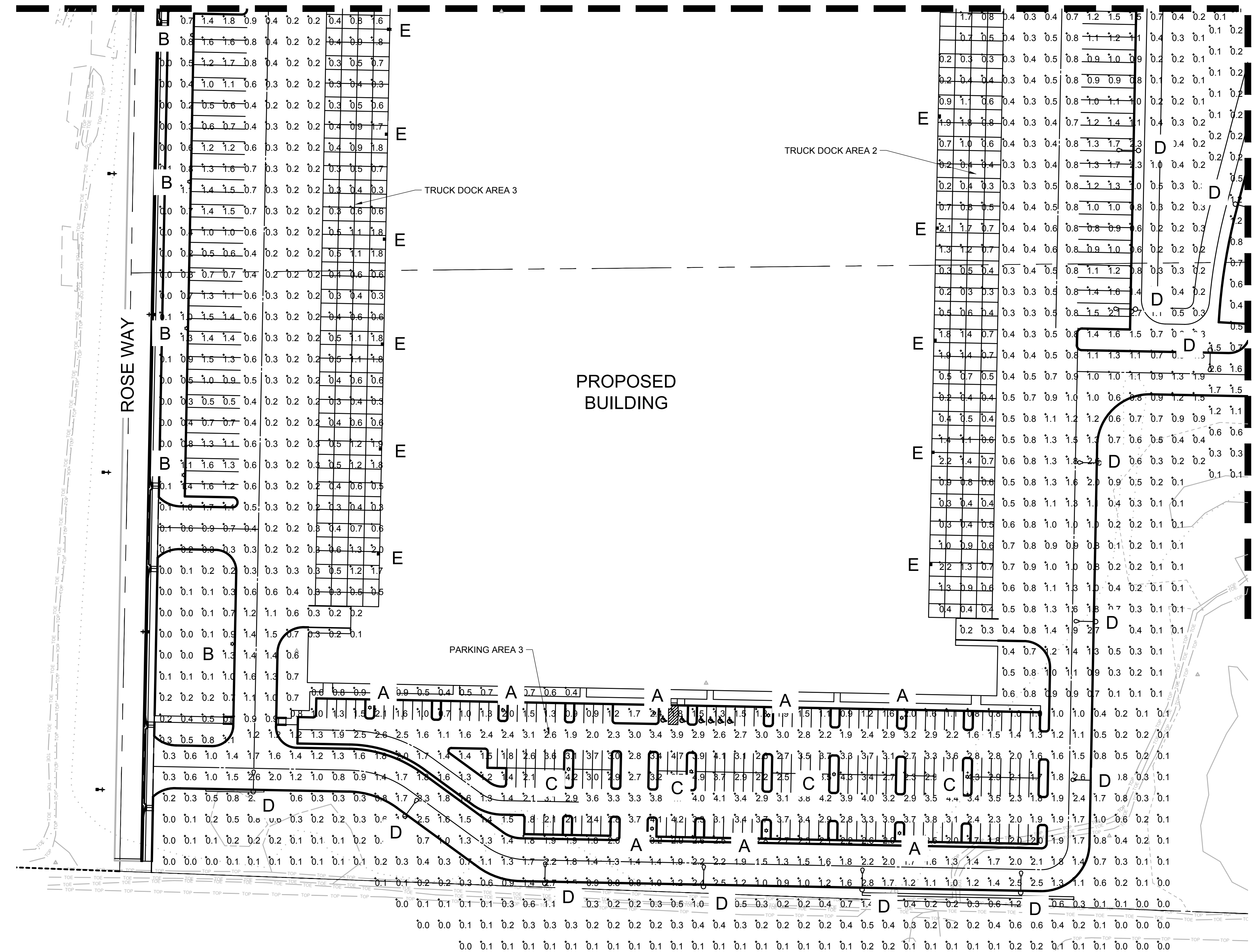
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JOB NO. **2220334.00**

DESIGN REVIEW SUBMITTAL 12/01/23

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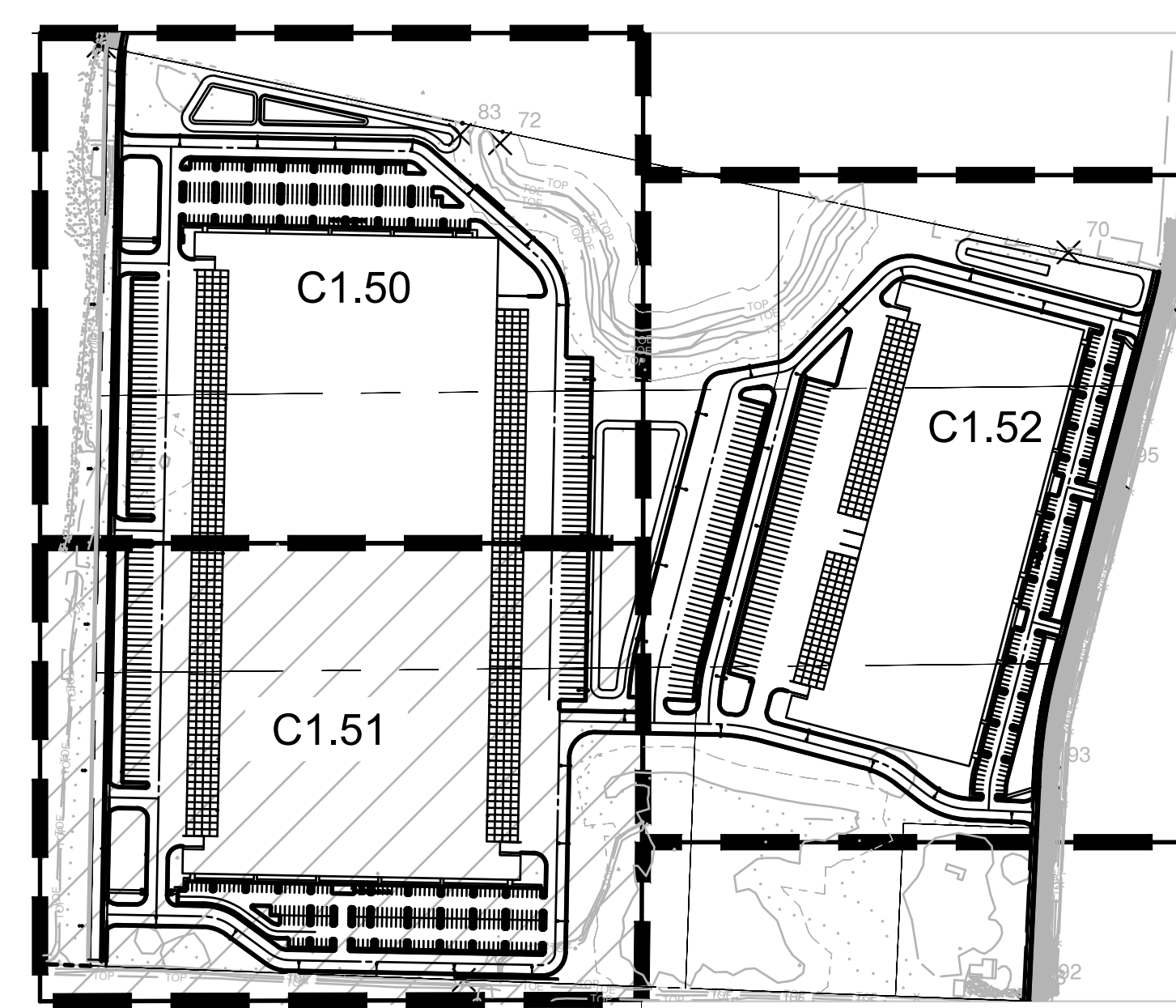
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MATCHLINE - SEE 1/C5.12

LUMINAIRE SCHEDULE									
SYM	QTY	MANUFACTURER	CATALOG #	DISTRIBUTION	WATTS	VOLTAGE	HEIGHT	MA LENGTH	CONFIGURATION
☆	25	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
☆	15	LITHONIA LIGHTING	ESX1 LED P2 40K R3 HS MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
☆	8	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	TWIN
○	42	AMERICAN ELECTRIC LIGHTING	ATBO P305 R4 4K	AUTOBAHN LED COBRA HEAD FULL CUTOFF	145	UNIVERSAL (120-277 V)	30 FT	8 FT	COBRA HEAD
■	28	LITHONIA LIGHTING	TWR1 LED ALO-HIGH 40K UVOLT	TWR LED WALL PACK	58	UNIVERSAL (120-347 V)	30 FT	N/A	SINGLE

PHOTOMETRIC CALCULATIONS	
SITE AREA	AVERAGE (FC)
ACCESS LOOP	0.89
PARKING AREA 1	1.30
PARKING AREA 2	1.53
PARKING AREA 3	1.36
TRUCK DOCK AREA 1	0.85
TRUCK DOCK AREA 2	0.68
TRUCK DOCK AREA 3	0.60
TRUCK PARKING	0.74



JOB NO. **2220334.00**



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REVISION SCHEDULE		
Delta	Issued As	Issue Date

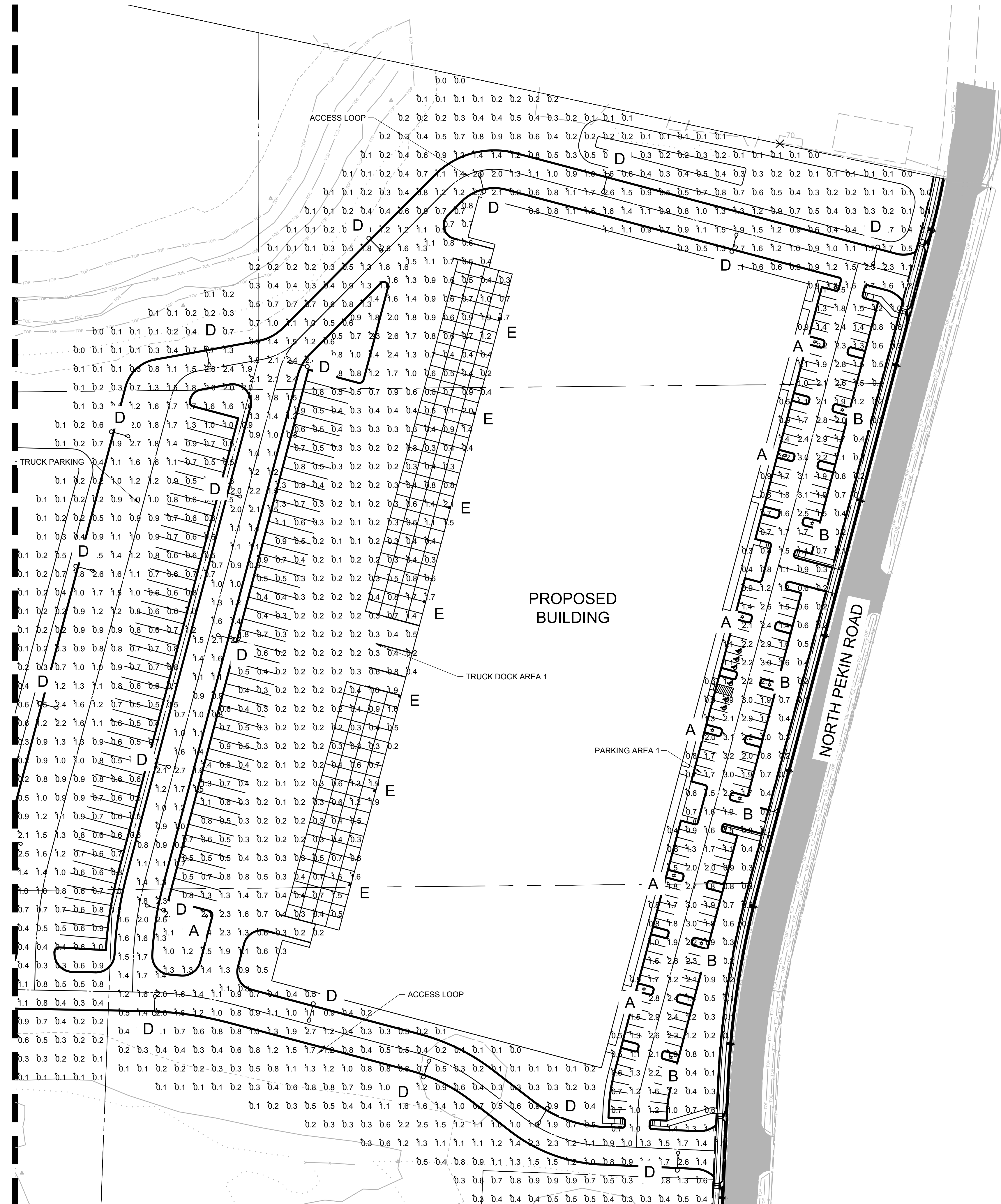
SHEET TITLE:
**PHOTOMETRIC
PLAN**

SHEET:

C1.52

JOB NO. **2220334.00**

DESIGN REVIEW SUBMITTAL 12/01/23
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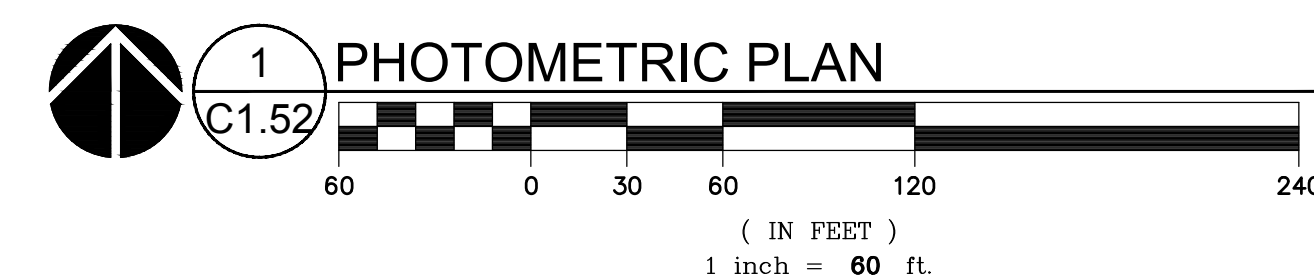
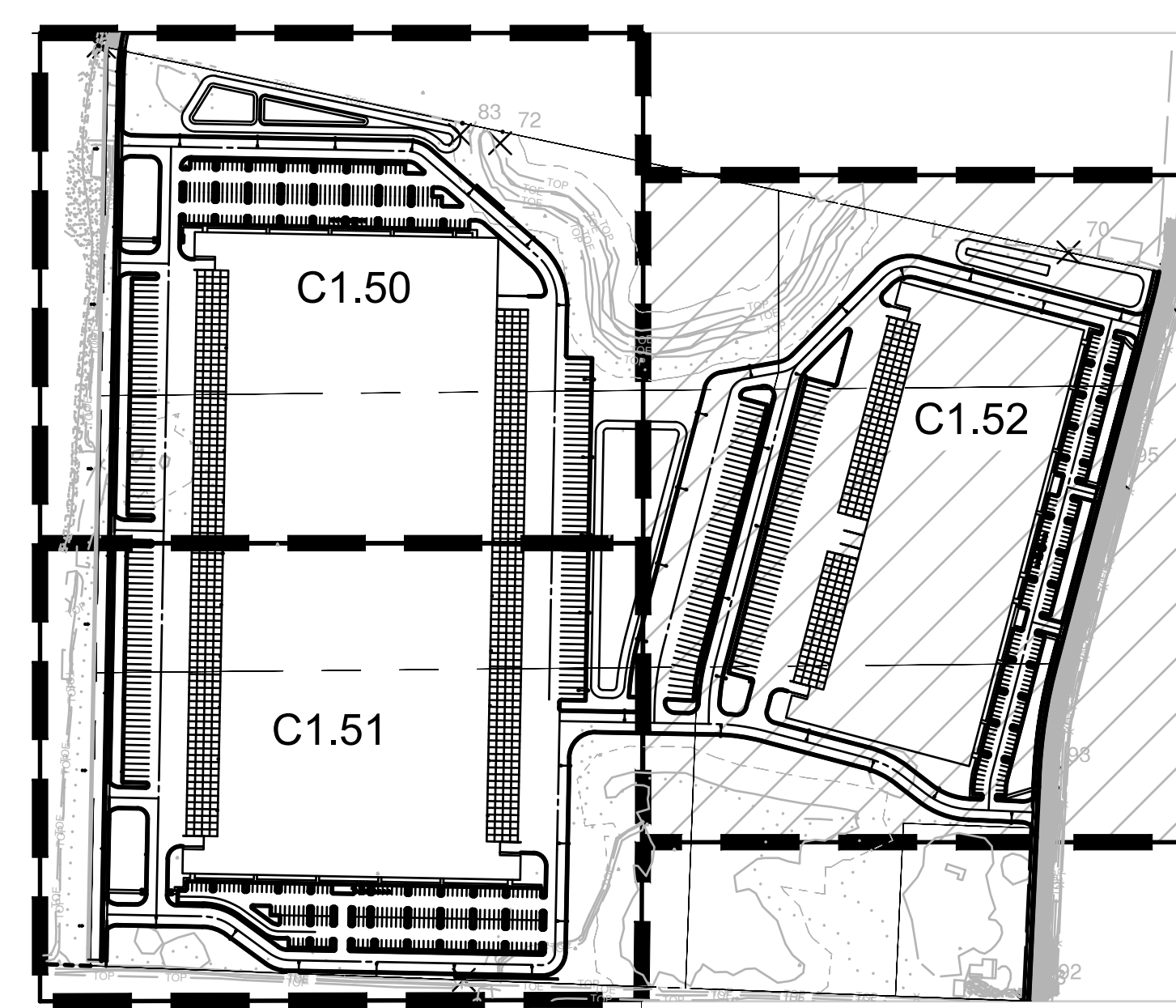


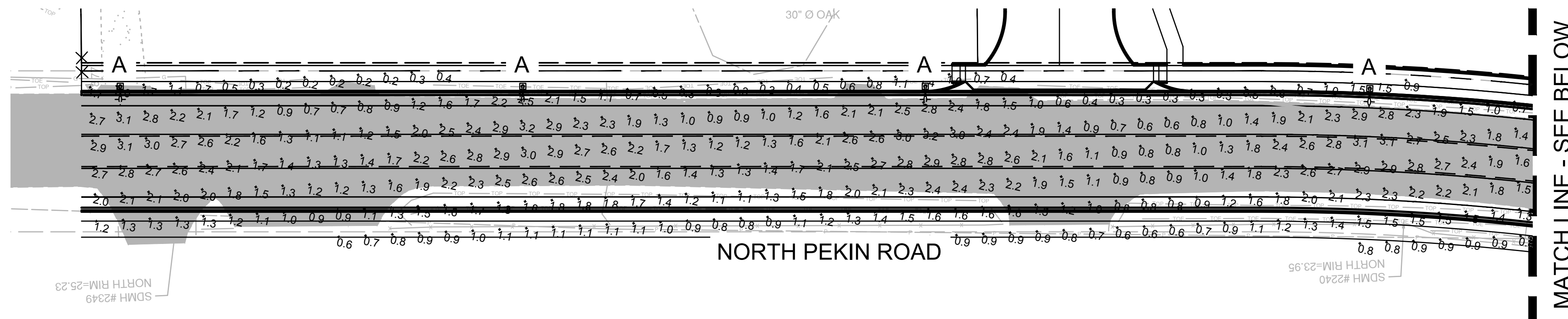
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MATCHLINE - SEE 1/C1.51

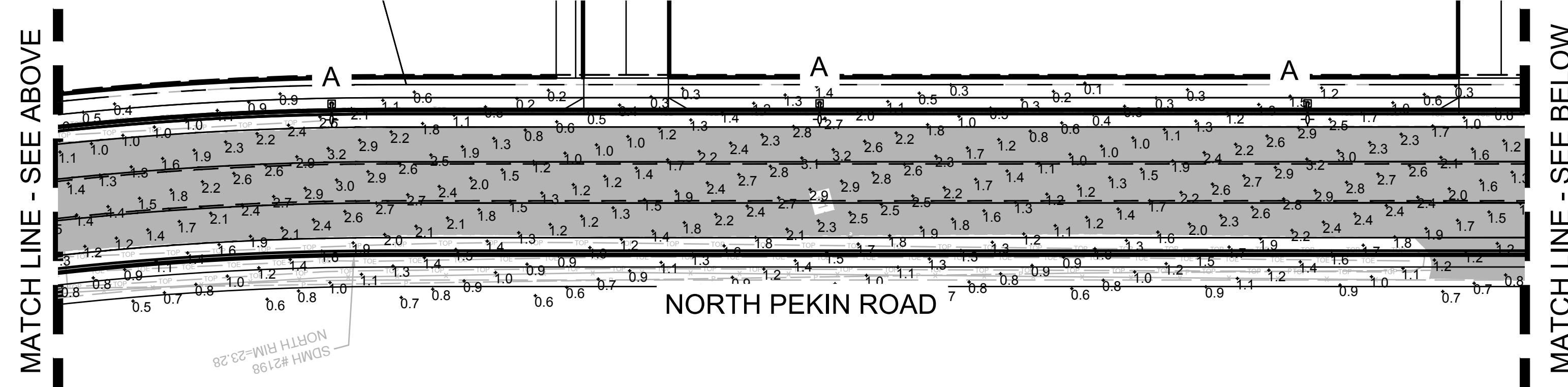
LUMINAIRE SCHEDULE									
SYM	QTY	MANUFACTURER	CATALOG #	DISTRIBUTION	WATTS	VOLTAGE	HEIGHT	MA LENGTH	CONFIGURATION
A	25	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
B	15	LITHONIA LIGHTING	ESX1 LED P2 40K R3 HS MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	SINGLE
C	8	LITHONIA LIGHTING	ESX1 LED P2 40K R3 MVOLT UPA BLS DOBCD M2	LITHONIA LIGHTING ESX1 LED FULL CUTOFF	50	UNIVERSAL (120-277 V)	30 FT	N/A	TWIN
D	42	AMERICAN ELECTRIC LIGHTING	ATBO P305 R4 4K	AUTOBAHN LED COBRA HEAD FULL CUTOFF	145	UNIVERSAL (120-277 V)	30 FT	8 FT	COBRA HEAD
E	28	LITHONIA LIGHTING	TWR1 LED ALO-HIGH 40K UVOLT	TWR LED WALL PACK	58	UNIVERSAL (120-347 V)	30 FT	N/A	SINGLE

PHOTOMETRIC CALCULATIONS	
SITE AREA	AVERAGE (FC)
ACCESS LOOP	0.69
PARKING AREA 1	1.30
PARKING AREA 2	1.53
PARKING AREA 3	1.36
TRUCK DOCK AREA 1	0.65
TRUCK DOCK AREA 2	0.68
TRUCK DOCK AREA 3	0.60
TRUCK PARKING	0.74



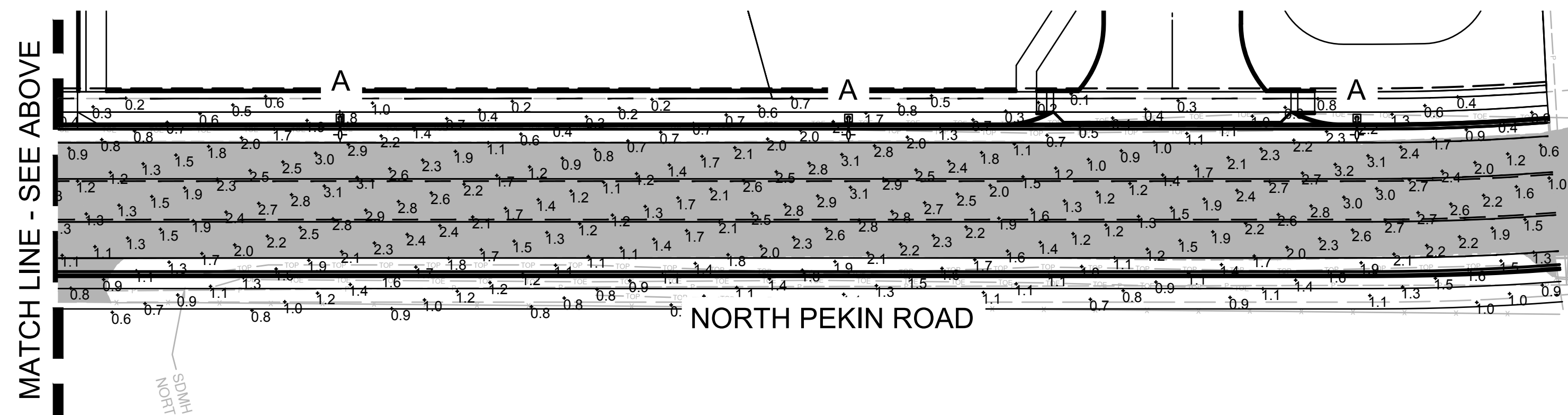


MATCH LINE - SEE BELOW



MATCH LINE - SEE ABOVE

MATCH LINE - SEE BELOW



MATCH LINE - SEE ABOVE

LUMINAIRE SCHEDULE									
SYM	QTY	MANUFACTURER	CATALOG #	DISTRIBUTION	WATTS	VOLTAGE	HEIGHT	MA LENGTH	CONFIGURATION
A	10	AMERICAN ELECTRIC LIGHTING	ATBO P305 R3 4K	AUTOBAHN LED COBRA HEAD FULL CUTOFF	145	UNIVERSAL (120-277 V)	30 FT	8 FT	COBRA HEAD

PHOTOMETRIC CALCULATIONS:
NORTH PEKIN ROAD
AVERAGE = 1.55 FC

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
PHOTOMETRIC PLAN - NORTH PEKIN ROAD

SHEET:
C1.53
JOB NO. **2220334.00**



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Delta	Issued As	Issue Date

SHEET TITLE:
**PHOTOMETRIC
PLAN - ROSE
WAY**

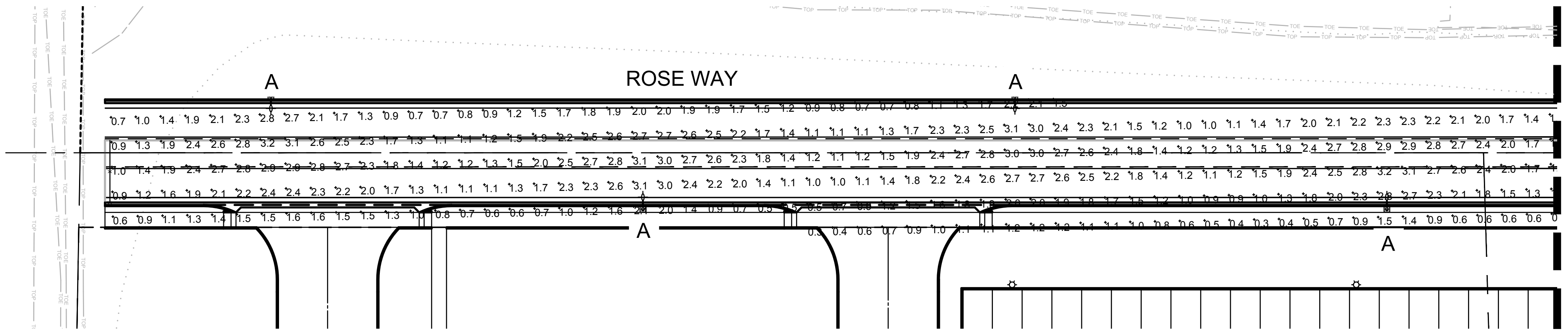
SHEET:

C1.54

JOB NO. **2220334.00**

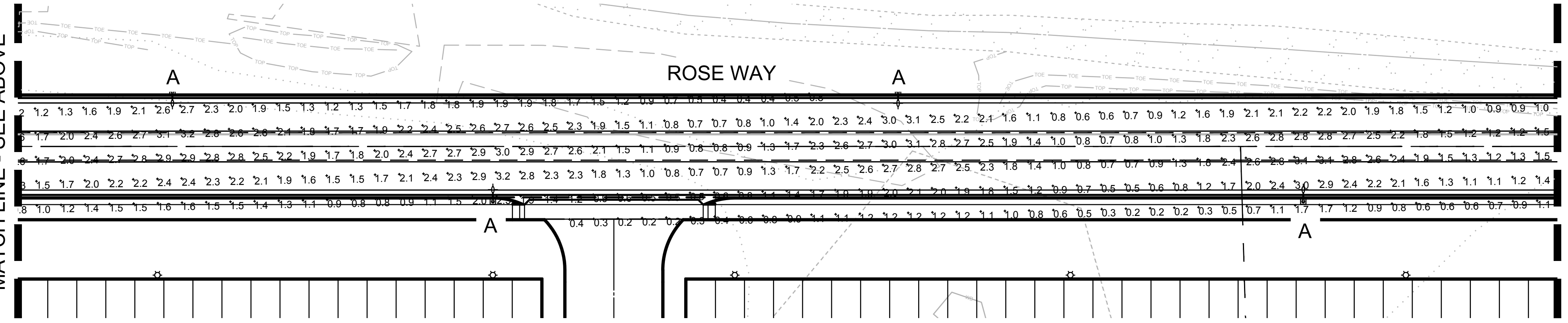
DESIGN REVIEW SUBMITTAL 12/01/23

2203001\GRP\MCK\PROJECTS\PROJECTS\222033400\DRAWINGS\CIVIL\C1.54 PHOTOMETRICS PLAN.DWG AOC 11/30/23 08:42 1:30



1 PHOTOMETRIC PLAN
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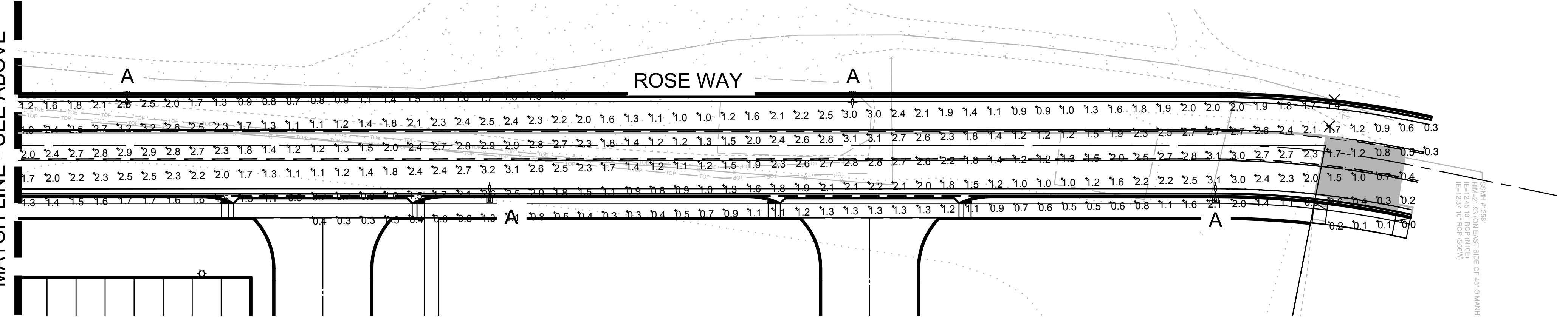
MATCH LINE - SEE BELOW



2 PHOTOMETRIC PLAN
C1.54

MATCH LINE - SEE ABOVE

MATCH LINE - SEE BELOW

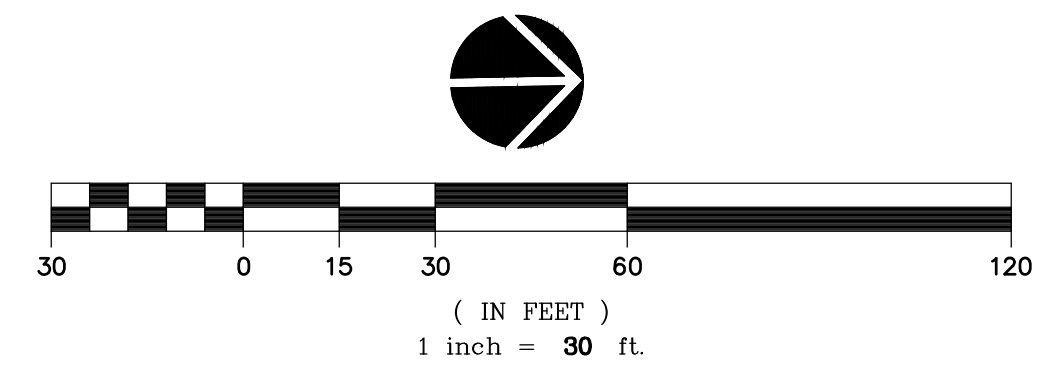


3 PHOTOMETRIC PLAN
C1.54

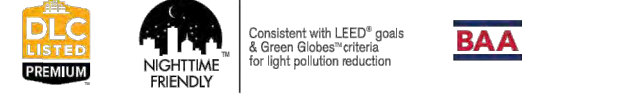
MATCH LINE - SEE ABOVE

LUMINAIRE SCHEDULE									
SYM	QTY	MANUFACTURER	CATALOG #	DISTRIBUTION	WATTS	VOLTAGE	HEIGHT	MA LENGTH	CONFIGURATION
A	12	AMERICAN ELECTRIC LIGHTING	ATBO P305 R3 4K	AUTOBAHN LED COBRA HEAD FULL CUTOFF	145	UNIVERSAL (120-277 V)	30 FT	8 FT	COBRA HEAD

PHOTOMETRIC CALCULATIONS:
ROSE WAY:
AVERAGE = 1.67 FC



JOB NO. **2220334.00**



Autobahn Series ATB0 Roadway Lighting

PRODUCT OVERVIEW



Features:

OPTICAL

The Autobahn's new molded silicone optics provide exceptional performance. Silicone optics are superior to other polymeric materials in the areas of: optical efficiency, thermal performance, and reduction in dirt accumulation, all of which can lead to long term lumen degradation and a shift in optical distribution. Also, because silicone allows for the molding of fine details as well as thick sections, it produces the most crisp, clean and well-defined lighting distributions available. Silicone optics paired with modern LEDs allow the Autobahn to take full advantage of both technologies.

Same Light: Performance is comparable to 100 - 400W HPS roadway luminaires. White Light: Correlated color temperature - 4000K, or optional 2700K, 3000K or 5000K, all 70 CRI minimum.

Unique IP66 rated LED light engines provide 0% uptime and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing. Available in Type II, III, IV, and V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated > 100,000 hours at 25°C, L70. Electronic driver has an expected life of 100,000 hours at a 25°C ambient.

Lower Energy: Saves an expected of 40-60% over comparable HID luminaires.

Robust Surge Protection: Two different surge protection options provide a minimum of ANSI C136.2 10kV/5kA protection. 20kV/10kA protection is also available.

Luminaire ships with a 0-10v dimmable driver. Luminaire is continuous and step dimming capable via AD option or controls installed on P7 photocentral receptacle option.

MECHANICAL

Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easy leveling at installation.

Rugged die-cast aluminum housing and door are polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

Master arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Provides a 3G vibration rating per ANSI C136.31

Wildlife shield is cast into the housing (not a separate piece).

CONTROLS

NEMA 3 pin photocentral receptacle is standard, with the Acuity designed ANSI standard 7 pin receptacle optionally available.

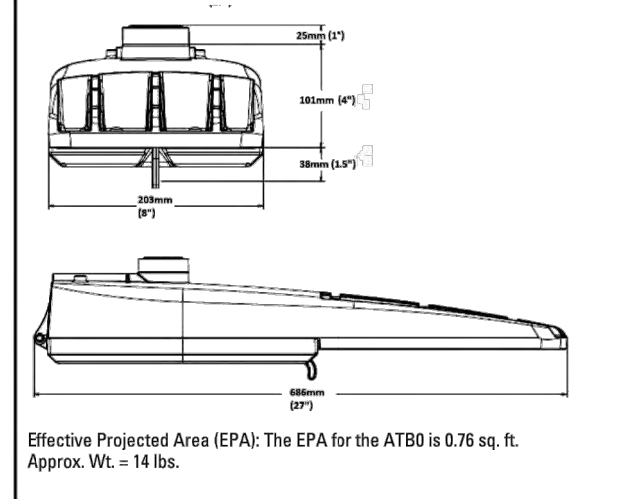
Premium solid state locking style photocentral - PCS (10 year rated life) Extreme long life solid state locking style photocentral - PCLL (20 year rated life).

Optional onboard Adjustable Output module allows the light output and input wattage to be modified to meet site specific requirements, and also can allow a single fixture to be flexibly applied in many different applications.

Applications:

- Roadways
- Off ramps
- Residential streets
- Parking lots

DIMENSIONS



Effective Projected Area (EPA) The EPA for the ATB0 is 0.78 sq. ft. Approx. Wt. = 14 lbs.

STANDARDS

DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QL, to confirm which versions are qualified.

Color temperatures of ≤ 3000K must be specified for International Dark-Sky Association certification.

Rated for -40°C to 40°C ambient
CSA certified to U.S. and Canadian standards
Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy American(s) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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Autobahn Series ATB0 Roadway Lighting

ORDERING INFORMATION

Series	LED Performance Package	Voltage	Optics
ATB0 Autobahn LED Roadway	P201 5,369 lumens nominal ¹	MVOLT Multi-volt, 120V - 277V	R2 Roadway Type I
	P202 6,943 lumens nominal ¹	347 347V ¹	R3 Roadway Type III
	P203 10,056 lumens nominal ¹	480 480V ¹	R11 Roadway Type III Long
	P204 12,176 lumens nominal ¹	XVOLT 277V-480V ¹	R4 Roadway Type IV ¹
	P205 13,767 lumens nominal ¹		R5 Roadway Type V
	P301 16,367 lumens nominal ¹		
	P302 12,185 lumens nominal ¹		
	P303 15,351 lumens nominal ¹		
	P304 17,714 lumens nominal ¹		
	P305 19,893 lumens nominal ¹		
	P451 16,320 lumens nominal ¹		
	P452 19,087 lumens nominal ¹		
	P453 23,092 lumens nominal ¹		
	P454 25,070 lumens nominal ¹		
	P455 27,091 lumens nominal ¹		
	P456 28,347 lumens nominal ¹		
	P457 29,715 lumens nominal ¹		

Options			
Color Temperature (CCT)	Misc.	Controls:	Accessories:
(Blank) 4000K CCT, 70 CRI Min.	BL External Bubble Level	3 Pin NEMA Photocentral Receptacle (Standard)	House Side Shields for field installation
Z7K 2700K CCT, 70 CRI Min.	HSS House-Side Shield	P7 7 Pin Photocentral Receptacle (Dimmable Driver Included) ²	ATBOP20XR2R3L5HSS for use with P201 - P205, R2, R3 & R5 distributions
3K 3000K CCT, 70 CRI Min.	NL Nema Label	NR No Photocentral Receptacle	ATBOP30XR2R3L5HSS for use with P301 - P305, R3, R4 & R5 distributions
5K 5000K CCT, 70 CRI Min.	BAA Buy America(s) Act Compliant	AD Field Adjustable Output	ATBOP45XR2R3L5HSS for use with P451 - P457, R2, R3, R4 & R5 distributions
	UMR-XX 8" Horizontal Arm for Round Pole, Painted to match fixture	PCS Solid State Lighting Photocentral (120-277V) ¹	ATBOP45XR2R3L5HSS for use with P451 - P457, R2, R3, R4 & R5 distributions
	UMS-XX 8" Horizontal Arm for Square Pole, Painted to match fixture	PCLL Solid State Long Life Photocentral	ATBOP45XR2R3L5HSS for use with P451 - P457, R2, R3, R4 & R5 distributions
	UMR-GALV 8" Horizontal Arm for Round Pole, Galvanized	SK Shorting Cap	ATBOP45XR2R3L5HSS for use with P451 - P457, R2, R3, R4 & R5 distributions
	UMS-GALV 8" Horizontal Arm for Square Pole, Galvanized	Light Tresspass Shield	ATBOUTS ATB0 Universal Light Tresspass Shield
Surge Protection		Packaging	ATBDECOR-AS ATB Decorative Arms
(Blank) Standard 20kV/10kA SPD ³		(Blank) Single Unit (Standard)	ATBDECOR-AS-XX ATB Decorative Arm for Square Pole Painted to match fixture
MP MOV Pack 10kV/5kA		JP Job Pack (42/Pallet)	ATBDECOR-XX ATB Decorative Arm for Round Pole Painted to match fixture
Terminal Block			
(Blank) Terminal Block (Standard)			
TZ Wired to L1 & L2 Positions			

Notes

- Not available in 347 or 480V.
- Not available with HSS.
- Not available with P451 - P457 performance packages.
- Not available with P201 performance package + 347V or 480V.
- Not available with P456 or P457 performance packages.
- Not available with XVOLT option.
- XVOLT not available with P201, P202, P456 or P457 performance packages.



Warranty Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

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Autobahn Series ATB0 Roadway Lighting

PERFORMANCE PACKAGE

ATB0	Distribution	Input Watts	2700K		3000K		4000K/5000K	
			Lumens	LPW	Lumens	LPW	Lumens	LPW
P201	R2	36	4,983	137	5,473	151	5,488	150
	R3		4,952	136	5,107	140	5,550	152
	R4		4,893	130	4,891	135	5,105	142
	R5		5,045	139	5,130	141	5,346	147
	R6		5,084	142	5,384	148	5,387	150
P202	R2	49	6,429	132	7,100	147	7,203	148
	R3		6,200	131	6,479	137	7,237	148
	R4		6,037	123	6,233	127	6,567	134
	R5		6,517	136	6,749	140	6,906	144
	R6		6,560	137	6,888	146	6,961	146
P203	R2	70	9,005	130	10,050	144	10,150	147
	R3		8,951	129	9,471	134	10,280	148
	R4		8,422	120	8,858	124	9,161	131
	R5		9,494	137	9,673	139	10,060	145
	R6		9,188	134	9,794	142	9,736	142
P204	R2	88	11,007	125	11,800	136	12,410	141
	R3		10,940	124	11,490	132	12,470	141
	R4		10,147	115	10,494	119	11,608	125
	R5		11,485	132	11,900	136	12,170	139
	R6		11,230	131	11,780	137	11,900	138
P205	R2	102	12,339	121	12,850	125	13,800	137
	R3		12,554	120	13,110	128	14,100	138
	R4		11,346	111	11,734	116	12,341	121
	R5		13,051	130	13,680	136	13,830	138
	R6		12,589	127	13,080	132	13,340	135
P301	R2	67	9,527	140	10,450	154	10,480	153
	R3		9,469	139	10,590	158	10,820	158
	R4		9,880	134	9,101	136	9,768	146
	R5		9,579	144	10,210	152	10,150	152
	R6		9,220	145	10,570	154	10,300	154
P302	R2	83	11,118	135	11,730	142	12,300	149
	R3		11,050	134	12,280	150	12,520	152
	R4		10,443	126	10,808	128	11,360	137
	R5		11,589	140	12,220	153	12,380	148
	R6		11,343	137	12,120	147	12,020	145
P303	R2	106	14,152	130	15,080	140	15,420	141
	R3		14,066	131	15,230	142	15,950	148
	R4		12,940	122	13,147	124	14,086	133
	R5		14,514	136	15,720	146	15,380	144
	R6		14,439	136	15,140	142	15,300	144
P304	R2	124	16,705	130	17,180	136	18,010	141
	R3		16,603	131	17,880	141	18,230	144
	R4		14,961	121	15,146	122	16,274	131
	R5		16,845	135	18,160	145	17,890	143
	R6		17,043	137	17,870	142	18,060	145
P305	R2	145	16,396	124	16,720	134	20,160	136
	R3		16,276	124	20,070	135	20,440	138
	R4		16,596	114	16,880	116	18,052	124
	R5		18,695	129	20,050	138	19,810	137
	R6		18,781	130	19,350	135	19,880	136



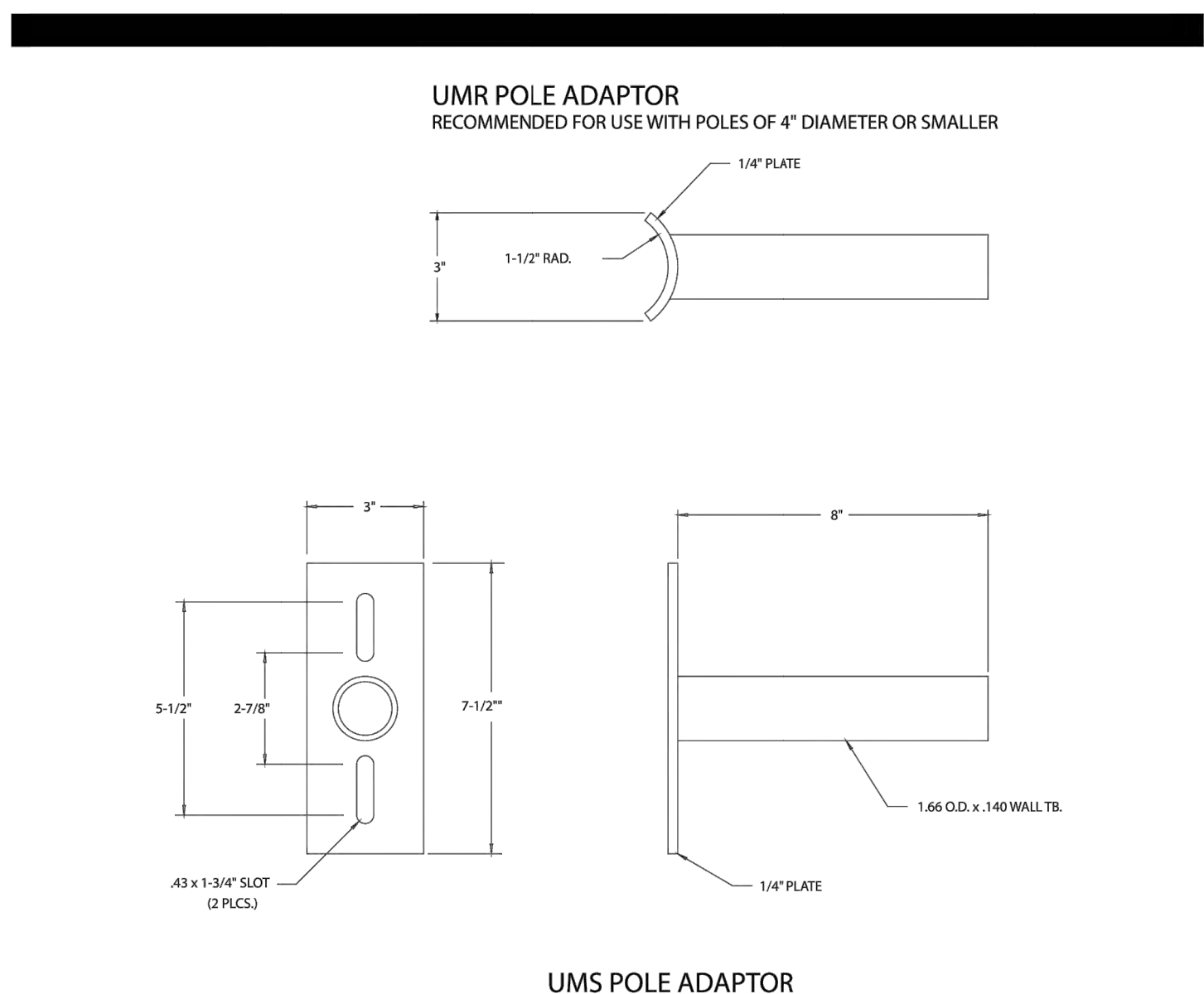
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Autobahn Series ATB0 Roadway Lighting



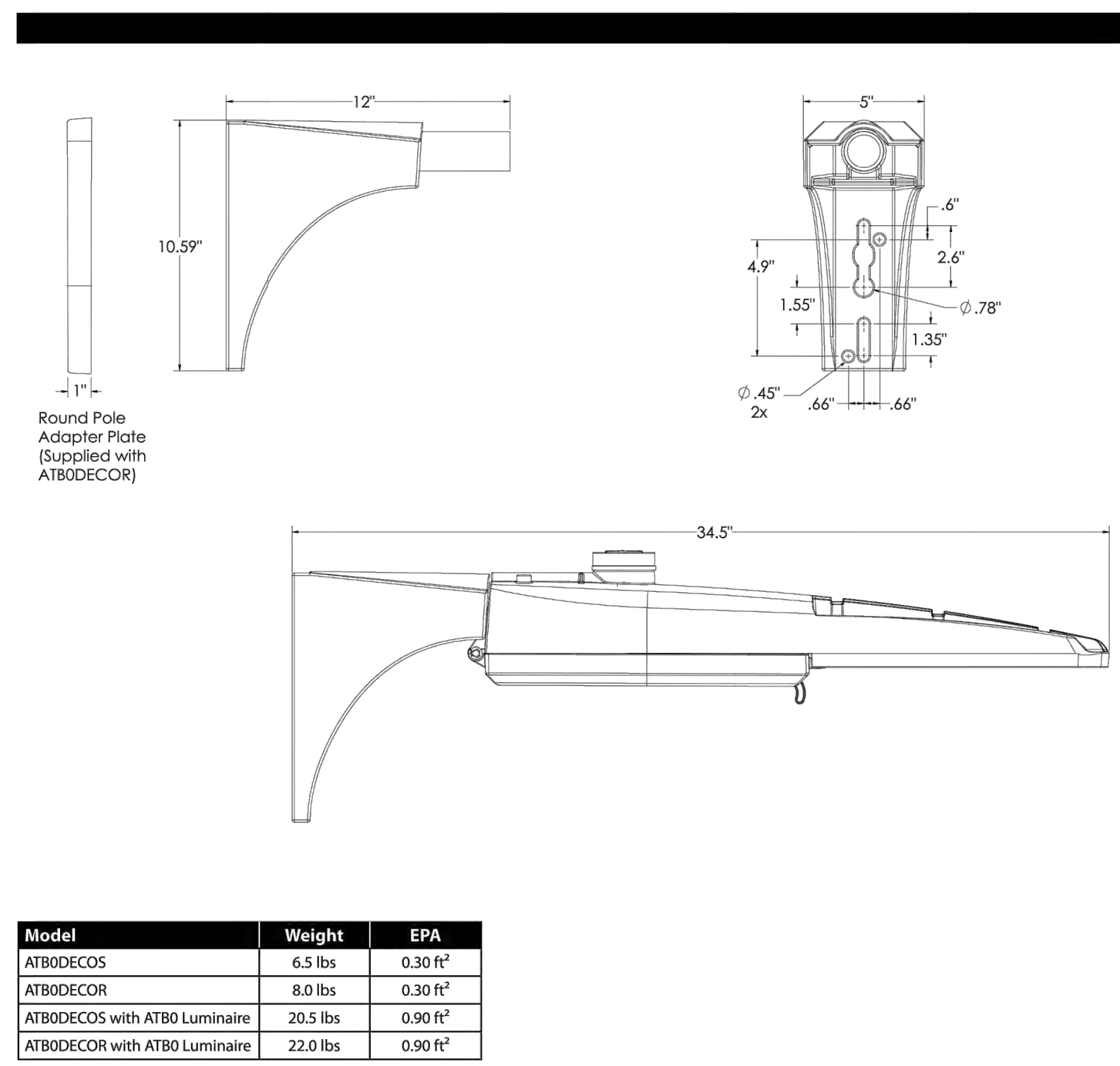
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Autobahn Series ATB0 Roadway Lighting



Model	Weight	EPA
ATBODECOS	6.5 lbs	0.30 ft ²
ATBODECOR	8.0 lbs	0.30 ft ²
ATBODECOS with ATB0 Luminaire	20.5 lbs	0.90 ft ²
ATBODECOR with ATB0 Luminaire	22.0 lbs	0.90 ft ²



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INDUSTRIAL PARK



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SHEET TITLE:
PHOTOMETRIC
DETAILS

SHEET:

C1.55

JOB NO. 2220334.00



ESX1 LED Area Luminaire

- Specifications**
- EPA 0.40 ft² (0.04 m²)
 - Length: 19.9" (50.5 cm)
 - Width: 12" (30.5 cm)
 - Height: 2.9" (7.4 cm)
 - Weight: 11.2 lbs (5.1 kg)

Ordering Information

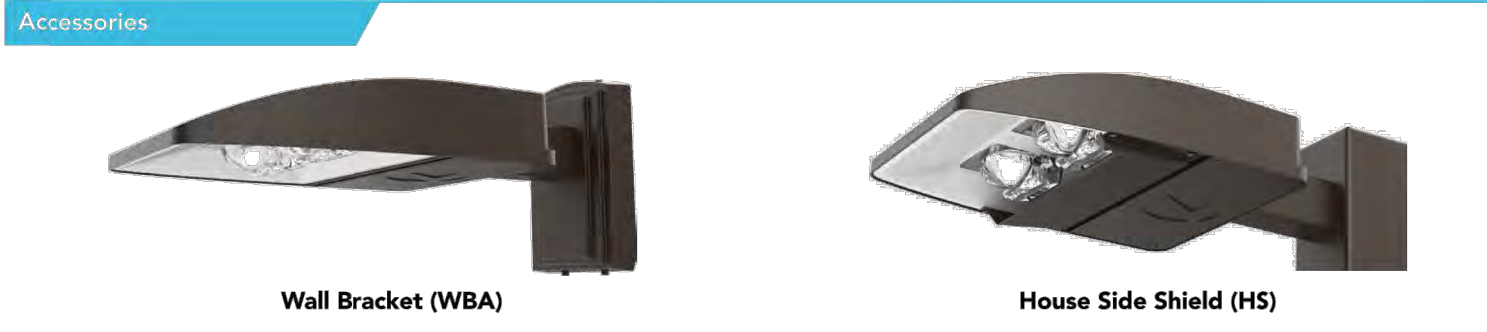
HID Equivalent	Luminaire/Package	High		Low		Distribution	Voltage	Catalog Number	CI Code	UPC
		Lumens	Watts	Lumens	Watts					
4000K	ESX1 LED P2	14,000	98W	8,000	50W	Type 3	120-277V	ESX1 LED P2 40K R3 MVOLT UPA BLS DOBID M2	*269PG3	00194994838302
						Type 4	120-277V	ESX1 LED P4 40K R3 MVOLT UPA BLS DOBID M2	*269PG8	00194994838340
						Type 5	120-277V	ESX1 LED P4 40K R5 MVOLT UPA BLS DOBID M2	*269PG5	00194994838418
400W	ESX1 LED P4	25,000	190W	21,000	146W	Type 3	120-277V	ESX1 LED P4 40K R3 MVOLT UPA BLS DOBID M2	*269PG3	00194994838463
						Type 4	120-277V	ESX1 LED P4 40K R5 MVOLT UPA BLS DOBID M2	*269PG8	00194994838463
						Type 5	120-277V	ESX1 LED P4 40K R5 MVOLT UPA BLS DOBID M2	*269PG5	00194994838463

Note: Luminaire ships set on high (switchable to low). All luminaires feature adjustable light output, a reversible arm for mounting on round and square poles (drilling template #20) and dark bronze finish. The lumen output and input watts shown are nominal values. Refer to the lumens table on page 3 for specific values.

Accessories: Order as separate catalog number.

Catalog Number	Description	CI Code	UPC
ESX1 WBA DOBID U	ESX1 WBA wall bracket, dark bronze finish	*2795T1	0019499592826
ESX1 HS	ESX1 House side shield, dark bronze	*2776S8	0019499592926

Note: Accessories are ordered and shipped separately from the luminaire. Additional lead times may apply.



Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit Accessories.

Round Tenon Mount - Pole Top Slipfits

Height	Part Number	Length	Weight
2-1/8"	UPA Invert	ASB4-190	ASB4-120
2-1/4"		ASB4-190	ASB4-120
2-3/8"		ASB4-190	ASB4-120
2-1/2"		ASB4-190	ASB4-120
2-5/8"		ASB4-190	ASB4-120
2-3/4"		ASB4-190	ASB4-120

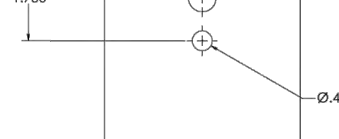
Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Weight	2 in 1/4"	2 in 1/2"	3 in 1/8"	3 in 1/2"	4 in 1/8"	4 in 1/2"
Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D		
Drill Dimensions	DM1HEX	DM2HEX	DM3HEX	DM4HEX	DM5HEX	DM6HEX		

HANDHOLE ORIENTATION



DRILLING TEMPLATE #20



Luminaire EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Mounting Type	Weight	2 in 1/4"	2 in 1/2"	3 in 1/8"	3 in 1/2"	4 in 1/8"	4 in 1/2"
UPA - Reversible Arm Mount	0.40	0.79	0.79	1.19	1.19	1.58	0.79

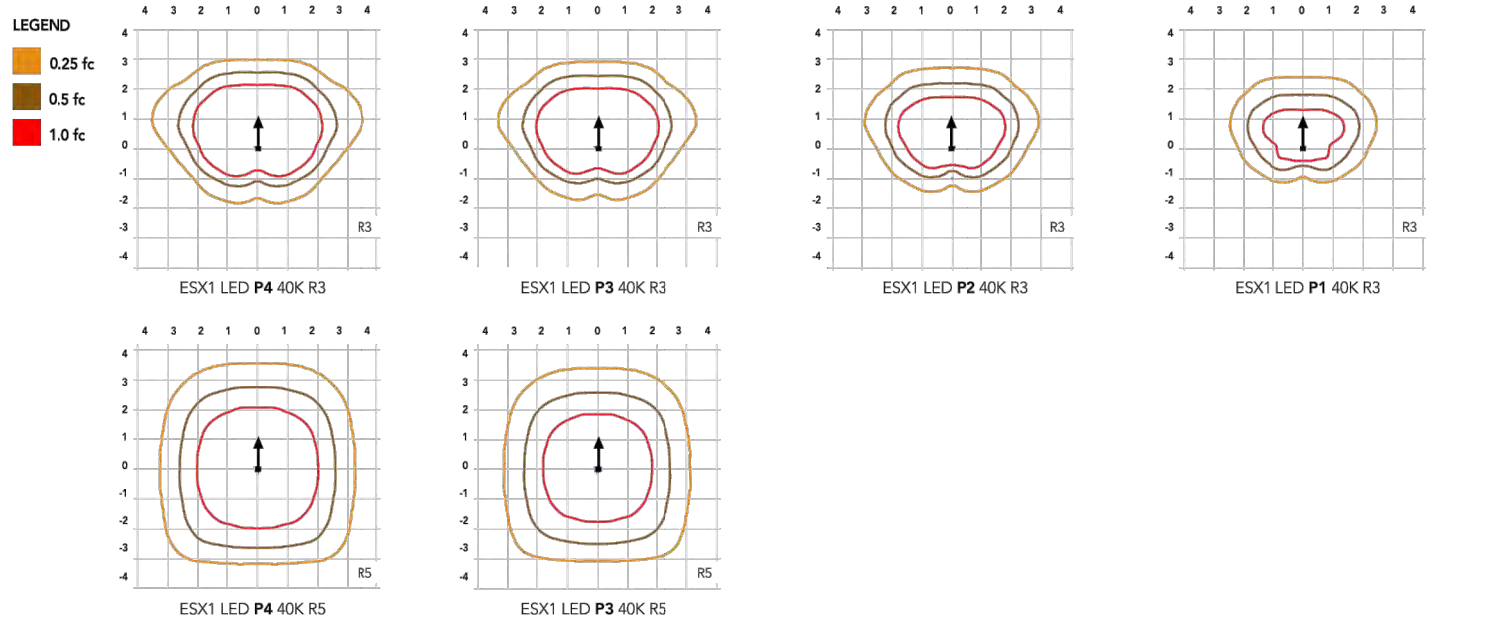


Adjustable Light Output (ALO) technology:
Internal bi-level switch with two light levels for greater flexibility within one product (default set to high)

Part Number	Lumens	Watts	EPD (lm/Watt)
ESX1 LED P2	14,000	8,000	150W to 250W
ESX1 LED P4	25,000	21,000	400W

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's ESX1 Area homepage.



Performance Data

Lumen Output

Lumen values are photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Site	Performance Package	System Watt	Input Watts	Output Lumens	lm/Watt	lm/ft ²	lm/ft ²	lm/ft ²	lm/ft ²	lm/ft ²			
ESX1 LED P2	P1 (switched to low)	50W	83	7,874	2	0	2	157	7,995	2	0	2	160
	P2	98W	83	15,971	2	0	2	142	16,128	2	0	2	144
ESX1 LED P4	P3 (switched in low)	146W	83	20,658	3	0	3	141	20,881	3	0	3	143
	P4	190W	83	21,695	3	0	3	140	21,914	3	0	3	139

Electrical Load

Performance Package	System Watt	Input Watts	Output Lumens	lm/Watt	lm/ft ²	lm/ft ²	lm/ft ²
P1 (low)	50W	0.41	0.24	0.21	0.18	---	---
P2	98W	0.81	0.47	0.41	0.35	---	---
P3 (low)	146W	1.22	0.70	0.61	0.53	0.42	0.30
P4	190W	1.58	0.91	0.79	0.69	0.55	0.40

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for the performance noted in a 25°C ambient and hour of LED testing listed per IESNA LM-80-08 and reported per IESNA LM-81-11.

Ambient Temperature	Relative Lumen Output
0°C	32%
5°C	41%
10°C	50%
15°C	59%
20°C	68%
25°C	77%
30°C	85%
35°C	93%
40°C	104%

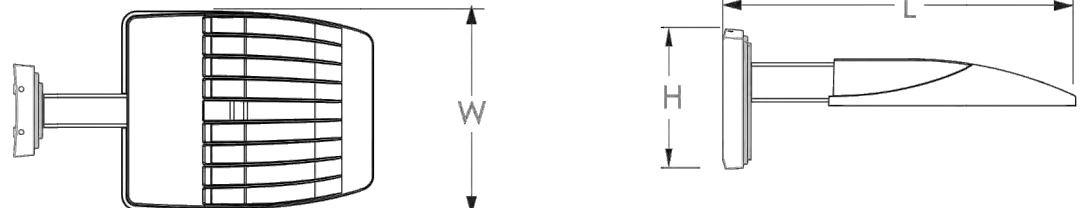
Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the performance noted in a 25°C ambient and hour of LED testing listed per IESNA LM-80-08 and reported per IESNA LM-81-11.

Performance Package	Projected Lumen Maintenance (at 50,000 hrs)
P1/P2	89%
P3	89%
P4	89%

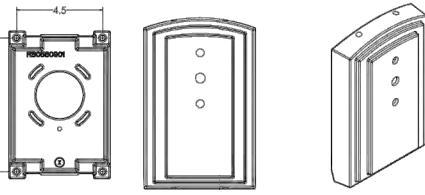
Dimensions

ESX1 with Wall Bracket (WBA)



- Length: 21.7" (55.1)
- Width: 12" (30.5 cm)
- Height: 2.9" (7.4 cm) Main Body
- 8.9" (22.6 cm) Wall Bracket
- Weight: 14.2 lbs (6.4 kg)

Wall Bracket (WBA) Mounting Detail



FEATURES & SPECIFICATIONS

INTENDED USE

The ESX1 offers a complete area lighting package providing everything needed to replace 150W to 400W HID area luminaires. Adjustable light output provides two light levels from one product, allowing greater flexibility while helping reduce inventory costs.

CONSTRUCTION

The ESX1 LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED efficacy and extends component life. The mounting arm is made of extruded aluminum and its universal function allows for mounting on round and square poles. The luminaire optics are IP60 rated, and sealed against moisture and environmental contaminants. The low-profile design results in a low EPC, ESX1 is rated for minimum 3.5 G vibration load per ANSI C136.31.

FINISH

Exterior parts are protected by a Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. The result is a high-quality finish that is warranted not to crack or peel. The standard finish provided on the housing and mounting arm is dark bronze.

OPTICS

Designed for one-for-one replacement of HID luminaires, acrylic reflective lenses are engineered for application efficiency, distributing the light to where it is needed most, providing greater coverage and improved back-light control. Available in distribution Type 3 and Type 5. A house side shield accessory is available and can be used with both optics.

ELECTRICAL

Light engines consist of high-efficiency LEDs with LED lumen maintenance greater than 100,000 hours. Color temperature (CCT) options of 4000K and 5000K with minimum CRI of 70 are available. Electronic drivers are 0-10V, capable of continuous dimming, and ensure system power factor >90% and THD <20%. All luminaires have 4KV surge protection. Driver input voltages available in MVOLT (120-277V) and HVOLT (047-480V).

ADJUSTABLE LIGHT OUTPUT (ALO)

ALO allows dimming the luminaire via a switch that is accessible in the driver compartment. Luminaires ship on the high setting. Use ESX1 LED P4 20,000 Lumens to replace 400W HID luminaires. When less light and/or more energy savings is desired, switch to low (P3) setting at 21,000 lumens. Use ESX1 LED P2 to replace 250W HID luminaires. When less light and/or more energy savings is desired, switch to low (P1) setting at 8,000 lumens or when replacing down to 150W HID.

INSTALLATION

The ESX1 features an extruded aluminum arm that is reversible allowing it to mount on both round and square poles. ESX1 can be mounted onto minimum 3.5" square and round poles. A wall mount bracket is also available.

LISTINGS

UL listed to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at: dqlists.org/DQL to confirm which versions are qualified.

WARRANTY

3-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/usopen/warranty-terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



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Delta	Issued As	Issue Date

SHEET TITLE:
PHOTOMETRIC DETAILS

SHEET:
C1.56

JOB NO. **2220334.00**



Catalog Number _____
 Notes _____
 Type _____

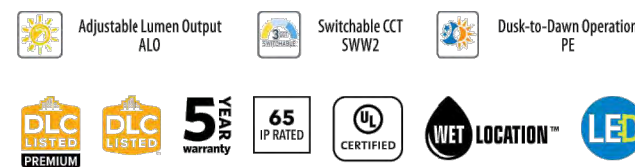
Contractor Select™
TWR LED
 LED Wall Pack
 Adjustable+Switchable+Photocell



The Lithonia Lighting® TWR wall packs combine the power of the latest generation of LEDs in a popular and classic day-form to provide exceptional energy savings. These wall packs give ultimate versatility to both the distributor and contractor by offering 18 configurations in one product with their standard Adjustable Lumen Output (ALO), Switchable color temperature (SWWZ), and adjustable photocell (P3) features.

FEATURES:

- Two sizes deliver from 2,300 lumens up to 16,100 lumens, replacing 70W to 400W HID luminaires
- Energy savings of up to 86% when replacing HID wall packs with less than two year paybacks
- Three power levels of adjustable lumen output. Switchable CCT(3000K/4000K/5000K) offers warm, cool and daylight in a single fixture
- Standard photocell can be turned on or off
- IP65 rated, Die-cast aluminum housing and borosilicate glass lens
- Up to 155 LPW



Catalog Number	Adjustable Lumen Output ALO	Switchable CCT SWWZ	Dock-to-Open Operation PE	Input Voltage	CRI
TWR1 LED ALO SWWZ UVOLT PE DBBTD	2,300 Lumens 5,300 Lumens 8,500 Lumens*	Switchable 3000K, 4000K, 5000K	Included Standard, Selectable On*OPI	120-247V	80CRI
TWR2 LED ALO SWWZ UVOLT PE DBBTD	8,200 Lumens 12,100 Lumens 16,100 Lumens*				

* Default out of the box settings

Made to Order Options

CI Code	Input Voltage	Catalog Number	UPC	Number of fixtures per pallet	Traditional Replacement
*286GK1	120-277V	TWR1 LED ALO SWWZ UVOLT PE ETWC DBBTD	00196183389954	60	70W - 250W HID
*282T3	480V	TWR2 LED ALO SWWZ 480 DBBTD	00196183765819	32	250W - 400W HID

* Note: Made to order options are available with normal lead time

TWR LED Stock Configurations

Catalog Number	UPC	CI Code	Number of fixtures per pallet	Traditional Replacement
TWR1 LED ALO SWWZ UVOLT PE DBBTD	00196183389949	*286GWW	50	70W - 250W HID
TWR2 LED ALO SWWZ UVOLT PE DBBTD	00196183390028	*280GXS	40	250W - 400W HID

CONTRACTOR SELECT TWR LED ALO SWW

Page 1 of 3



Specifications

INTENDED USE:

The TWR LED combines traditional wall pack design with latest generation LEDs to provide an energy efficient, low maintenance LED wall pack suitable for replacing up to 400W Metal Halide fixtures. The traditional shape helps maintain building aesthetics when replacing only a portion of your building's wall packs. TWR LED is ideal for outdoor applications such as canopies, loading areas, self-storage and parking areas.

CONSTRUCTION:

Rugged cast aluminum housing with bronze polyester powder paint for lasting durability. Door is hinged on the side and can be detached for easy installation and service. Castings are sealed with a one-piece gasket to inhibit the entrance of external contaminants. Rated for outdoor installations, 40°C minimum ambient.

ELECTRICAL:

Light engine consists of long life, high efficacy LEDs mounted on an internal aluminum heat sink to maximize heat dissipation and promote long life. LEDs maintain 90% of light output at 50,000 hours of service. (LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology. The UVOL driver operates on any line voltage from 120-347V (50/60Hz). All luminaires have 6kV surge protection. There are no user serviceable parts. The fixture is supplied with a 0-10V driver and is dimmable by 0-10V controls.

BATTERY SPECS:

Emergency battery backup ETWC is a 7 Watt back up battery that delivers up to 1,000 lumens in emergency mode. The lowest operating temperature is 20°C and is compatible with the MVOLT model TWR1.

INSTALLATION

Designed for wall mounting above four feet from ground. Housing is configured for mounting directly over a standard 4" outlet box (by others) or for surface wiring via any of four convenient 1/2" threaded conduit entry hubs.

LISTINGS:

UL Listed to U.S. and Canadian safety standards for wet locations. Tested in accordance with IESNA LM-79 and LM-80 standards. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY:

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

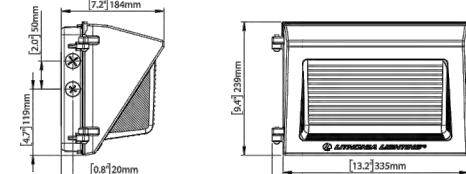
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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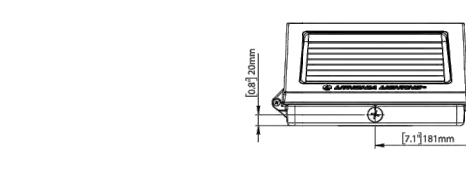
CONTRACTOR SELECT TWR1 LED ALO SWW
 Page 2 of 3

Dimensions

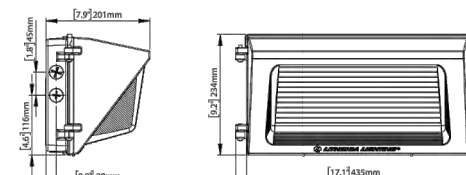
TWR1:
 Width: 13.2" / 33.5cm
 Height: 9.4" / 23.9cm
 Depth: 7.2" / 18.4cm
 Weight: 7.5lbs (3.4kg)



TWR1 ETWC:
 Width: 15.25" / 38.74cm
 Height: 10.75" / 27.31cm
 Depth: 8.75" / 22.23cm
 Weight: 9.6lbs (4.38kg)



TWR2:
 Width: 17.1" / 43.5cm
 Height: 9.2" / 23.4cm
 Depth: 7.9" / 20.1cm
 Weight: 12.1lbs (5.5kg)



All dimensions are inches (centimeters) unless otherwise indicated.



LUMEN OUTPUT:

Lumen values are from photometric tests performed in accordance with IESNA LM 79-08. Data is considered to be representative of configurations shown within the tolerances described within LM 79.

Size	Lumen Output	Input Wattage	CCT/BCRI	Delivered Lumens	Lumens Per Watt @ 4000K, 80CRI
TWR1	2,300	10W	3000K	2,295	145
			4000K	2,292	
			5000K	2,359	
	5,300	36W	3000K	5,277	151
			4000K	5,347	
			5000K	5,390	
8,500	59W	3000K	8,400	148	
		4000K	8,581		
		5000K	8,523		

Size	Lumen Output	Input Wattage	CCT/BCRI	Delivered Lumens	Lumens Per Watt @ 4000K, 80CRI
TWR2	8,200	55W	3000K	8,132	155
			4000K	8,427	
			5000K	8,290	
	12,100	82W	3000K	11,875	152
			4000K	12,449	
			5000K	12,037	
16,100	112W	3000K	15,794	147	
		4000K	16,270		
		5000K	16,262		

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CONTRACTOR SELECT TWR LED ALO SWW
 Page 3 of 3



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Client

TCC

Project

**TCC WOODLAND
 INDUSTRIAL PARK**



DATE: 11/20/23

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LANDSCAPE NOTES

GENERAL

- CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO COMMENCING WORK AND PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE CONTRACT DOCUMENTS.
- CALL BEFORE YOU DIG. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF ALL UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT IF THERE ARE ANY DISCREPANCIES WITH PLANTING ROOT ZONES. TO REQUEST LOCATES FOR PROPOSED EXCAVATION CALL 1-800-424-5555 (OR 811) IN WASHINGTON.
- NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS WITH EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
- CONTRACTOR IS RESPONSIBLE FOR DETERMINING MEANS AND METHODS FOR CONSTRUCTION. THESE DRAWINGS MAY INDICATE A LIMIT OF PROPOSED IMPROVEMENTS, LIMITS OF DEMOLITION, ETC FOR DELINEATION OF EXPECTED EXTENTS OF DISTURBANCE. HOWEVER FINAL IMPACT SHALL BE DETERMINED IN THE FIELD. SHOULD LIMITS OF DISTURBANCE EXCEED BOUNDARIES DEFINED IN DRAWINGS, CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR RESOLUTION.
- DAMAGE TO EXISTING CONCRETE CURB, ASPHALT PAVING, OR OTHER STRUCTURE SHALL BE REPAIRED OR REPLACED TO PRE CONSTRUCTION CONDITIONS.
- CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY DISRUPTION TO VEHICULAR CIRCULATION PRIOR TO COMMENCEMENT OF ANY WORK.
- THE DRAWINGS AND SPECIFICATIONS ARE DESIGNED TO BE COMPLEMENTARY TO ONE ANOTHER AND IMPLIED TO CORRESPOND WITH ONE ANOTHER. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR RESOLUTION IMMEDIATELY.

PLANT PROTECTION AND REMOVAL

- ALL EXISTING TREES, PLANTS, AND ROOTS SHALL BE PROTECTED FROM DAMAGE FROM ANY CONSTRUCTION PREPARATION, REMOVAL OR INSTALLATION ACTIVITIES WITHIN AND ADJACENT TO PROJECT LIMITS.
- LOCATION OF EXISTING TREES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. TREES INDICATED TO BE REMOVED SHALL ALSO INCLUDE COMPLETE REMOVAL OF STUMP AND ROOTS AND FILLING IN DEPRESSION WITH SUITABLE SOIL FILL.
- IF DISTURBANCE IS NECESSARY AROUND EXISTING TREES, CONTRACTOR SHALL PROTECT THE CROWN AND ALL WORK WITHIN THE TREE CRITICAL ROOT ZONE SHALL BE LIMITED TO THE USE OF HAND TOOLS AND MANUAL EQUIPMENT ONLY.
- EXISTING AREAS PROPOSED FOR NEW PLANT MATERIAL SHALL BE CLEARED AND LEGALLY DISPOSED UNLESS SO NOTED.

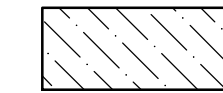
PLANTING

- SHRUBS ADJACENT TO PARKING AREAS SHALL BE PLANTED 2 FT MINIMUM AWAY FROM THE BACK OF CURB. SHRUBS AND GROUNDCOVER ALONG OTHER PAVEMENT EDGES SHALL BE PLANTED A MINIMUM OF ONE HALF THEIR ON CENTER SPACING AWAY FROM PAVEMENT EDGE.
- ALL PLANT MATERIAL SHALL BE HEALTHY NURSERY STOCK, WELL BRANCHED AND ROOTED, FULL FOLIAGE, FREE FROM INSECTS, DISEASES, WEEDS, WEED ROT, INJURIES AND DEFECTS WITH NO LESS THAN MINIMUMS SPECIFIED IN AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1-2004.
- TREES IN THE RIGHT OF WAY SHALL BE TALL ENOUGH TO BE LIMBED UP TO AT LEAST 8 FT ABOVE DRIVE SURFACE GRADE WHILE MAINTAINING ENOUGH BRANCHES TO SUPPORT HEALTHY GROWTH.
- DO NOT PLANT TREES ABOVE WATERLINES, UTILITIES, OR OTHER UNDERGROUND PIPING.
- REPLACE, REPAIR AND RESTORE DISTURBED LANDSCAPE AREAS DUE TO GRADING, TRENCHING OR OTHER REASONS TO PRE-CONSTRUCTION CONDITION AND PROVIDE MATERIAL APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
- A SOILS ANALYSIS, BY AN INDEPENDENT SOILS TESTING LABORATORY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE, SHALL BE USED TO RECOMMEND AN APPROPRIATE PLANTING SOIL AND/OR SPECIFIED SOIL AMENDMENTS.
- TOPSOIL SHALL BE AMENDED AS RECOMMENDED BY AN INDEPENDENT SOILS TESTING LABORATORY AND AS OUTLINED IN THE SPECIFICATION.
- ALL LANDSCAPED AREAS SHALL BE COVERED BY A LAYER OF ORGANIC MULCH TO A MINIMUM DEPTH OF 2-INCHES.

IRRIGATION

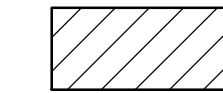
- UNLESS OTHERWISE INDICATED, ALL NEW LANDSCAPE AREAS TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. PROVIDE LOOP SYSTEM FOR OPTIMUM EFFICIENCY.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (IRRIGATION PLANS) TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. DRAWINGS TO INDICATE HEAD TYPE, GALLONS PER MINUTE, LATERAL LINES, AND BE AT MINIMUM SCALE OF 1"=20'
- CONTRACTOR TO DETERMINE STATIC WATER PRESSURE AT THE P.O.C. PRIOR TO PREPARING SHOP DRAWINGS.
- CONTRACTOR SHALL ESTABLISH MINIMUM PRESSURE AND MAXIMUM DEMAND REQUIREMENTS FOR IRRIGATION SYSTEM DESIGN, AND PROVIDE INFORMATION IN AN IRRIGATION SCHEDULE.
- IRRIGATION SYSTEM AS DESIGNED AND INSTALLED SHALL PERFORM WITHIN THE TOLERANCES AND SPECIFICATIONS OF THE SPECIFIED MANUFACTURERS.
- SYSTEM SHALL BE DESIGNED TO SUPPLY MANUFACTURER'S SPECIFIED MINIMUM OPERATING PRESSURE TO FARTHEST EMITTER FROM WATER METER.
- SYSTEM SHALL PROVIDE HEAD TO HEAD COVERAGE WITHOUT OVERSPRAY ONTO BUILDING, FENCES, SIDEWALKS, PARKING AREAS, OR OTHER NON-VEGETATED SURFACES.
- ALL IRRIGATION PIPE MATERIAL AND INSTALLATION SHALL CONFORM TO APPLICABLE CODE FOR PIPING AND COMPONENT REQUIREMENTS.
- PROVIDE SLEEVING AT ALL AREAS WHERE PIPE TRAVELS UNDER CONCRETE OR HARD SURFACING.
- VALVES SHALL BE WIRED AND INSTALLED PER MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND CONNECTED TO THE IRRIGATION CONTROLLER.
- REFER TO CIVIL DETAILS FOR POINT OF CONNECTION AND BACKFLOW PREVENTION INFORMATION.
- CONTROLLER TO BE MOUNTED ON BUILDING EXTERIOR. GENERAL CONTRACTOR TO COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE.
- ZONE THE FOLLOWING AREAS SEPARATELY: TEMPORARY AREAS, PERMANENT LANDSCAPE AREAS, AND TREES.
- QUICK COUPLERS TO BE PLACED EVERY 150 LINEAR FEET MAX.
- IRRIGATION SHALL BE WINTERIZED THROUGH LOW PRESSURE, HIGH VOLUME AIR BLOWOUT CONNECTION THROUGH QUICK COUPLER.
- THE SYSTEM SHALL BE GRAVITY DRAINED. THE CONTRACTOR SHALL PROVIDE APPROPRIATE MANUAL DRAINS AT LOW POINTS.

PLANT SCHEDULES



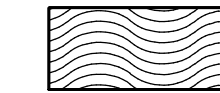
GENERAL LANDSCAPE

BOTANICAL / COMMON NAME	SPACING
TREES	
ACER RUBRUM 'BOWHALL'	
BOWHALL RED MAPLE	
ACER RUBRUM 'FRANKSRED'	
RED SUNSET MAPLE	
CALOCEDRUS DECURRENS	
INCENSE CEDAR	
CERCIDIPHYLLUM JAPONICUM	
KATSURA TREE	
CORNUS KOUSA	
KOUSA DOGWOOD	
GINKGO BILOBA 'AUTUMN GOLD'	
AUTUMN GOLD MAIDENHAIR TREE	
GINKGO BILOBA 'PRINCETON SENTRY'	
PRINCETON SENTRY MAIDENHAIR TREE	
GLEDITSIA TRIACANTHOS 'INERMIS 'SKYCOLE'	
SKYLINE HONEY LOCUST	
PARROTIA PERSICA 'RUBY VASE'	
RUBY VASE PERSIAN PARROTIA	
QUERCUS PALUSTRIS 'PRINGREEN'	
GREEN PILLAR PIN OAK	
QUERCUS ROBUR X BICOLOR 'LONG'	
REGAL PRINCE OAK	
ZELKOVA SERRATA 'GREEN VASE'	
GREEN VASE SAWLEAF ZELKOVA	
ZELKOVA SERRATA 'MUSASHINO'	
MUSASHINO JAPANESE ZELKOVA	
BOTANICAL / COMMON NAME	SPACING
SHRUBS	
CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	48" o.c.
KARL FOERSTER FEATHER REED GRASS	
CEANOTHUS GLORIOSUS	36" o.c.
POINT REYES CEANOTHUS	
CHOISYA TERNA 'SUNDANCE'	48" o.c.
SUNDANCE MEXICAN MOCK ORANGE	
CORNUS SERICEA 'FARROW'	36" o.c.
ARCTIC FIRE RED TWIG DOGWOOD	
CORNUS SERICEA 'FLAVIRAMEA'	36" o.c.
YELLOW TWIG DOGWOOD	
CORNUS SERICEA 'KELSEY'	36" o.c.
KELSEY'S DWARF RED TWIG DOGWOOD	
FORSYTHIA X INTERMEDIA 'KOGOLD'	48" o.c.
MAGIC GOLD FORSYTHIA	
FOTHERGILLA GARDENII	36" o.c.
DWARF FOTHERGILLA	
ILEX GLABRA 'SHAMROCK'	36" o.c.
SHAMROCK INKBERRY HOLLY	
MAHONIA AQUIFOLIUM	60" o.c.
OREGON GRAPE	
MAHONIA AQUIFOLIUM 'COMPACTA'	48" o.c.
COMPACT OREGON GRAPE	
NANDINA DOMESTICA 'GULF STREAM'	36" o.c.
GULF STREAM NANDINA	
NANDINA DOMESTICA 'LEMON LIME'	36" o.c.
LEMON LIME HEAVENLY BAMBOO	
OSMANTHUS HETEROPHYLLUS 'GOSHIKI'	48" o.c.
GOSHIKI HOLLY OLIVE	
PRUNUS LAUROCERASUS 'OTTO LUYKEN'	48" o.c.
OTTO LUYKEN LAUREL	
SARCOCOCCA RUSCIFOLIA	36" o.c.
FRAGRANT SARCOCOCCA	
SPIRAEA BETULIFOLIA 'TOR'	36" o.c.
GLOW GIRL BIRCHLEAF SPIREA	
SPIRAEA JAPONICA 'GOLDFLAME'	42" o.c.
GOLDFLAME JAPANESE SPIREA	
SPIRAEA JAPONICA 'GOLDMOUND'	48" o.c.
GOLDMOUND SPIRAEA	
VACCINIUM OVATUM 'SCARLET OVATION'	48" o.c.
SCARLET OVATION HUCKLEBERRY	
VIBURNUM DAVIDI	36" o.c.
DAVID VIBURNUM	
BOTANICAL / COMMON NAME	SPACING
GROUND COVERS	
ARCTOSTAPHYLOS UVA-URSI	
KINNIKINNICK	
LONICERA PILEATA	
PRIVET HONEYSUCKLE	
MAHONIA REPENS	
CREEPING MAHONIA	
PACHYSANDRA TERMINALIS	
JAPANESE PACHYSANDRA	
RUBUS CALYGINOIDES 'EMERALD CARPET'	
EMERALD CARPET CREEPING BRAMBLE	



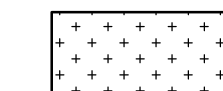
NATIVE + WETLAND BUFFER

BOTANICAL / COMMON NAME	SPACING
TREES	
ALNUS RUBRA	
RED ALDER	
CALOCEDRUS DECURRENS	
INCENSE CEDAR	
FRAXINUS LATIFOLIA	
OREGON ASH	
LARIX OCCIDENTALIS	
WESTERN LARCH	
QUERCUS GARRYANA	
OREGON WHITE OAK	
RHAMNUS PURSHIANA	
CASCARA	
BOTANICAL / COMMON NAME	SPACING
SHRUBS	
ACER CIRCINATUM	72" o.c.
VINE MAPLE	
GAULTHERIA SHALLON	48" o.c.
SALAL	
HOLODISCUS DISCOLOR	48" o.c.
CELANSTRUPAL	
MAHONIA AQUIFOLIUM	60" o.c.
OREGON GRAPE	
PHILADELPHUS LEWISII	48" o.c.
WILD MOCKORANGE	
RIBES SANGUINEUM	48" o.c.
RED FLOWERING CURRANT	
ROSA NUTKANA	48" o.c.
NOOTKA ROSE	
SPIRAEA DOUGLASSII	48" o.c.
WESTERN SPIREA	
SYMPHORICARPOS ALBUS	48" o.c.
COMMON WHITE SNOWBERRY	
VACCINIUM OVATUM 'SCARLET OVATION'	48" o.c.
SCARLET OVATION HUCKLEBERRY	
BOTANICAL / COMMON NAME	SPACING
GROUND COVERS	
ARCTOSTAPHYLOS UVA-URSI	
KINNIKINNICK	
FRAGARIA CHILOENSIS	
COAST STRAWBERRY	
MAHONIA REPENS	
CREEPING MAHONIA	



RIGHT OF WAY

BOTANICAL / COMMON NAME	SPACING
TREES	
ACER GINNALA 'FLAME'	
AMUR MAPLE	
ACER RUBRUM 'BOWHALL'	
BOWHALL RED MAPLE	
CERCIDIPHYLLUM JAPONICUM	
KATSURA TREE	
GLEDITSIA TRIACANTHOS 'INERMIS 'SKYCOLE'	
SKYLINE HONEY LOCUST	
QUERCUS COCCINEA	
SCARLET OAK	
ZELKOVA SERRATA 'GREEN VASE'	
GREEN VASE SAWLEAF ZELKOVA	
BOTANICAL / COMMON NAME	SPACING
SHRUBS	
BERBERIS THUNBERGII 'ATROPURPUREA NANA'	48" o.c.
DWARF RED LEAF JAPANESE BARBERRY	
CEANOTHUS GLORIOSUS	36" o.c.
POINT REYES CEANOTHUS	
CORNUS SERICEA 'KELSEY'	36" o.c.
KELSEY'S DWARF RED TWIG DOGWOOD	
JUNCUS PATENS 'ELK BLUE'	48" o.c.
SPREADING RUSH	
MAHONIA AQUIFOLIUM 'COMPACTA'	48" o.c.
COMPACT OREGON GRAPE	
PINUS MUGO VAR. PUMILIO	48" o.c.
MUGO PINE	
BOTANICAL / COMMON NAME	SPACING
GROUND COVERS	
RUBUS CALYGINOIDES 'EMERALD CARPET'	
EMERALD CARPET CREEPING BRAMBLE	



STORMWATER

BOTANICAL / COMMON NAME	SPACING
TREES	
ALNUS RUBRA	
RED ALDER	
CORNUS NUTALLII 'VENUS'	
VENUS DOGWOOD	
NYSSA SYLVATICA 'WILDFIRE'	
WILDFIRE TUPELO	
RHAMNUS PURSHIANA	
CASCARA	
BOTANICAL / COMMON NAME	SPACING
SHRUBS	
CAREX OBNUPTA	48" o.c.
SLOUGH SEDGE	
CORNUS SERICEA 'FARROW'	36" o.c.
ARCTIC FIRE RED TWIG DOGWOOD	
CORNUS SERICEA 'KELSEY'	36" o.c.
KELSEY'S DWARF RED TWIG DOGWOOD	
DESCHAMPSIA CESPIITOSA	12" o.c.
TUFTED HAIRGRASS	
JUNCUS PATENS 'ELK BLUE'	48" o.c.
SPREADING RUSH	
MAHONIA AQUIFOLIUM	60" o.c.
OREGON GRAPE	
SPIRAEA BETULIFOLIA 'TOR'	36" o.c.
GLOW GIRL BIRCHLEAF SPIREA	
SPIRAEA JAPONICA 'GOLDFLAME'	42" o.c.
GOLDFLAME JAPANESE SPIREA	
BOTANICAL / COMMON NAME	SPACING
GROUND COVERS	
ARCTOSTAPHYLOS UVA-URSI	
KINNIKINNICK	
FRAGARIA CHILOENSIS	
COAST STRAWBERRY	
MAHONIA REPENS	
CREEPING MAHONIA	

LANDSCAPE TYPES

	GENERAL LANDSCAPE	170,567 SF
	NATIVE LANDSCAPE	312,228 SF
	50' WETLAND BUFFER	206,230 SF
	WETLAND	143,527 SF
	RIGHT OF WAY LANDSCAPE	7,469 SF
	STORMWATER	118,052 SF

TOTAL ON-SITE LANDSCAPE	950,604 SF
TOTAL OFF-SITE LANDSCAPE	7,469 SF
TOTAL LANDSCAPE	958,073 SF

LANDSCAPE AREAS COVERED BY GROUNDCOVER, TREE CANOPY, AND SHRUBS	958,073 SF
---	------------

LANDSCAPE AREAS AREAS COVERED ONLY BY NONPLANT MATERIALS*	0 SF
---	------

PARKING LOT AREA (PASSENGER VEHICLES)	87,966 SF
PARKING LOT LANDSCAPE AREA	
SOUTH PASSENGER VEHICLE PARKING	8,741 SF
NORTH PASSENGER VEHICLE PARKING	7,379 SF
EAST PASSENGER VEHICLE PARKING	7,483 SF

TOTAL	23,603 SF
% OF PARKING LOT AREA	26.8%

*BARK DUST, CHIPS, AGGREGATE, OR OTHER NONPLANT GROUNDCOVERS MAY BE USED, BUT SHALL BE CONFINED TO AREAS UNDERNEATH PLANTS AND WITHIN THE DRIP LINES. NONPLANT GROUNDCOVERS CANNOT BE USED TO SATISFY THE COVERAGE REQUIREMENTS.



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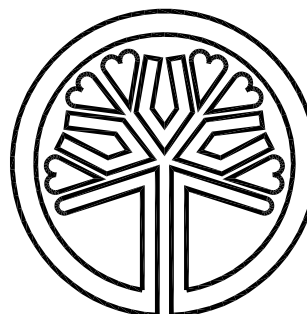
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Client

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Project

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INDUSTRIAL PARK



STATE OF WASHINGTON
LICENSED LANDSCAPE ARCHITECT
STEVEN PAUL TUTTLE
LICENSE NO. 1335
EXPIRES ON 7-14-25

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
LANDSCAPE NOTES AND PLANTING SCHEDULES

SHEET:

L0.01

JOB NO. **2220334.00**

DESIGN REVIEW SUBMITTAL 12/01/23

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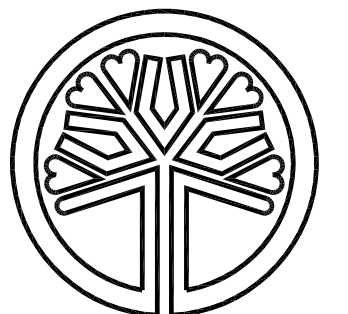
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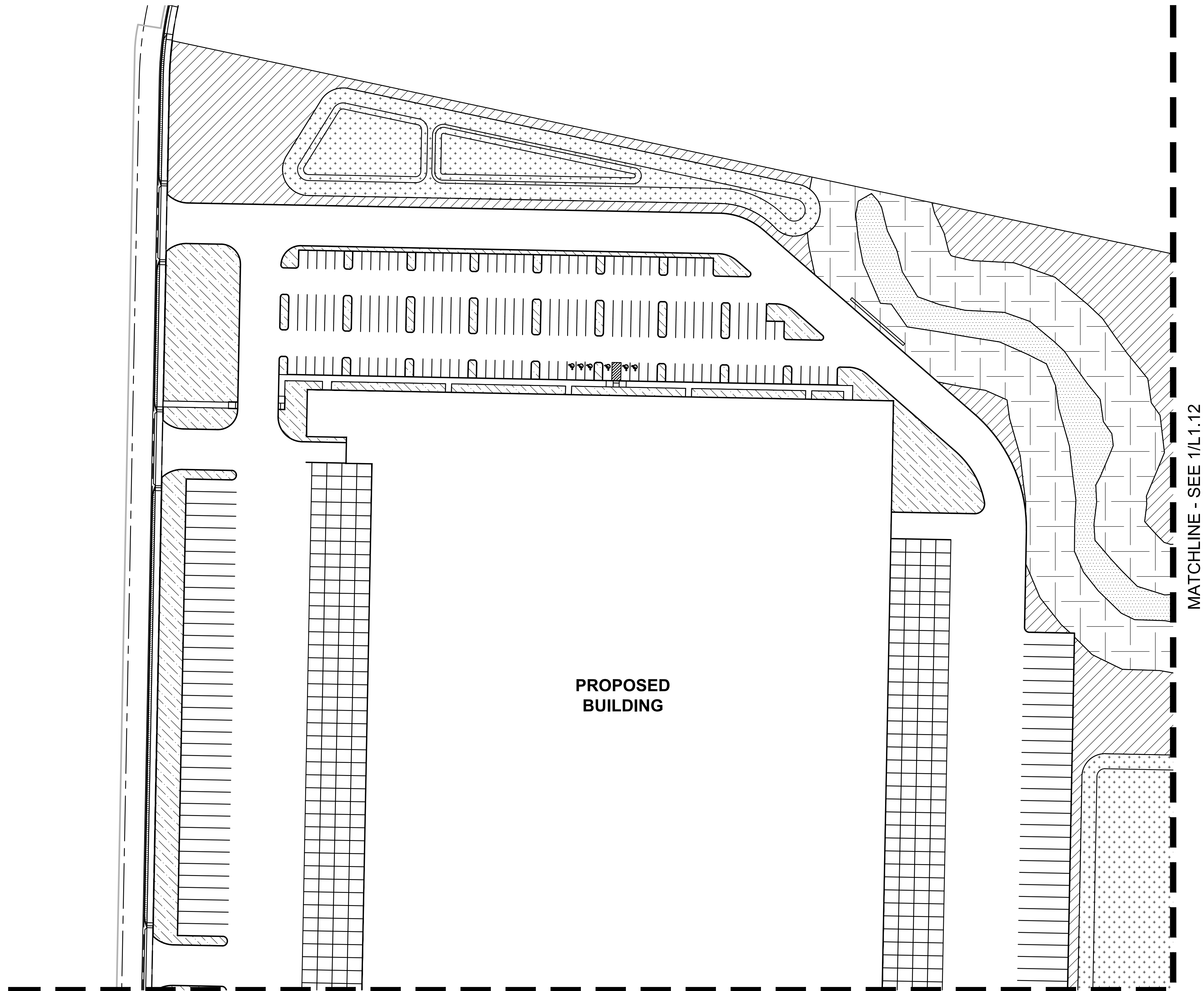
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Delta	Issued As	Issue Date

SHEET TITLE:
**LANDSCAPE
PLAN**

SHEET:

L1.10

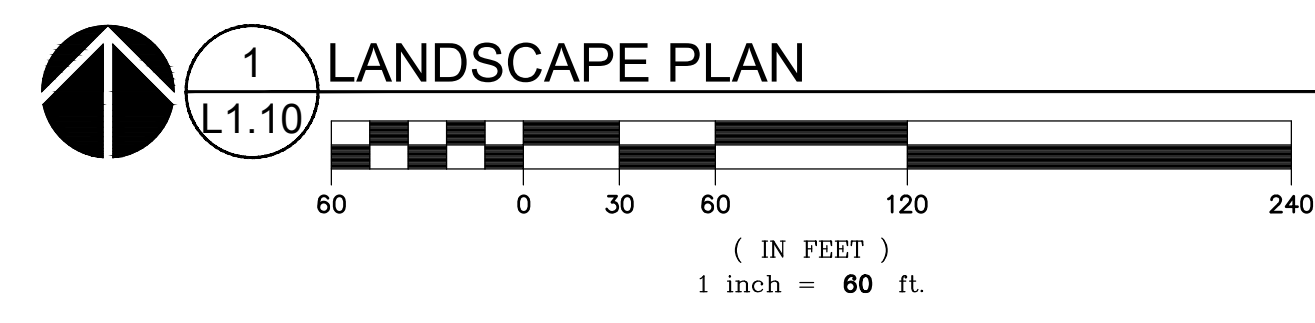
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**PROPOSED
BUILDING**

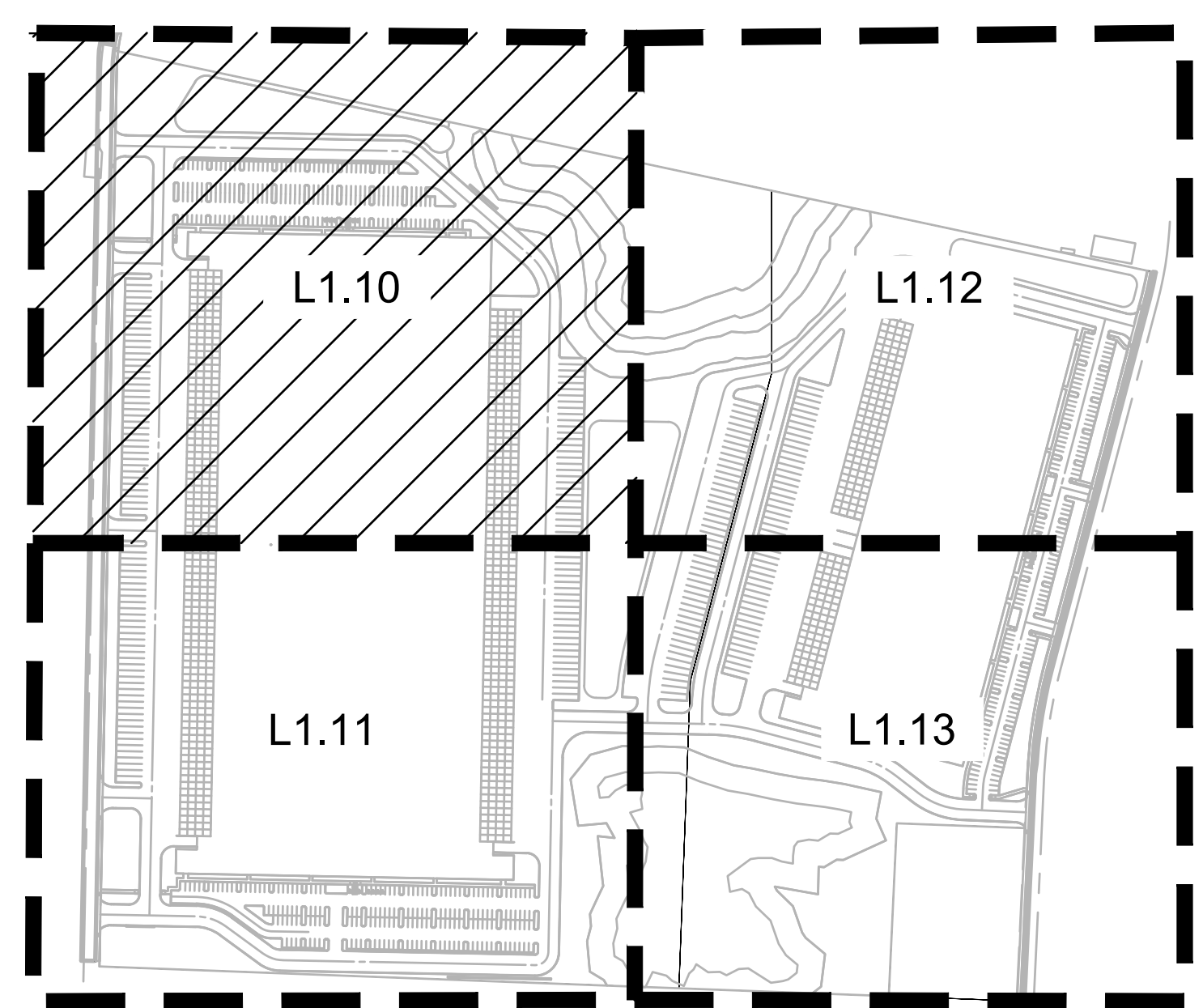
MATCHLINE - SEE 1/L1.12

MATCHLINE - SEE 1/L1.11



LANDSCAPE LEGEND

- GENERAL LANDSCAPE
- NATIVE LANDSCAPE
- 50' WETLAND BUFFER
- WETLAND
- RIGHT OF WAY LANDSCAPE
- STORMWATER



KEY MAP

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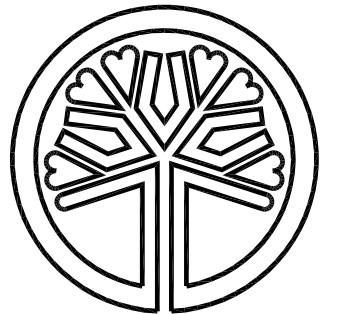
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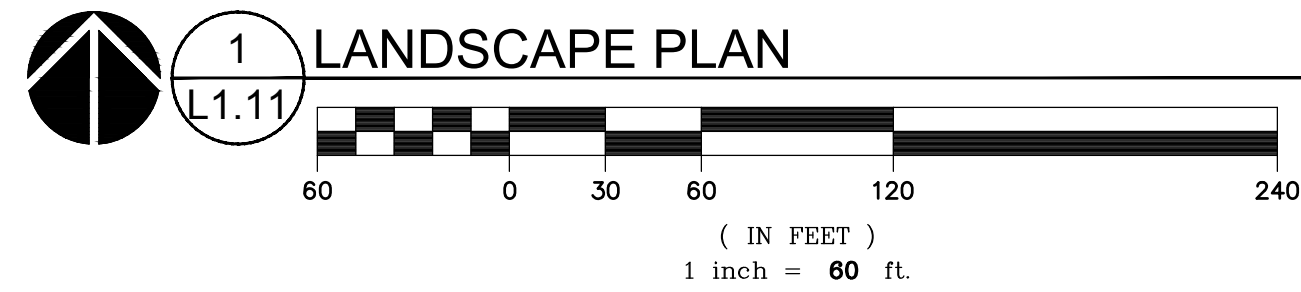
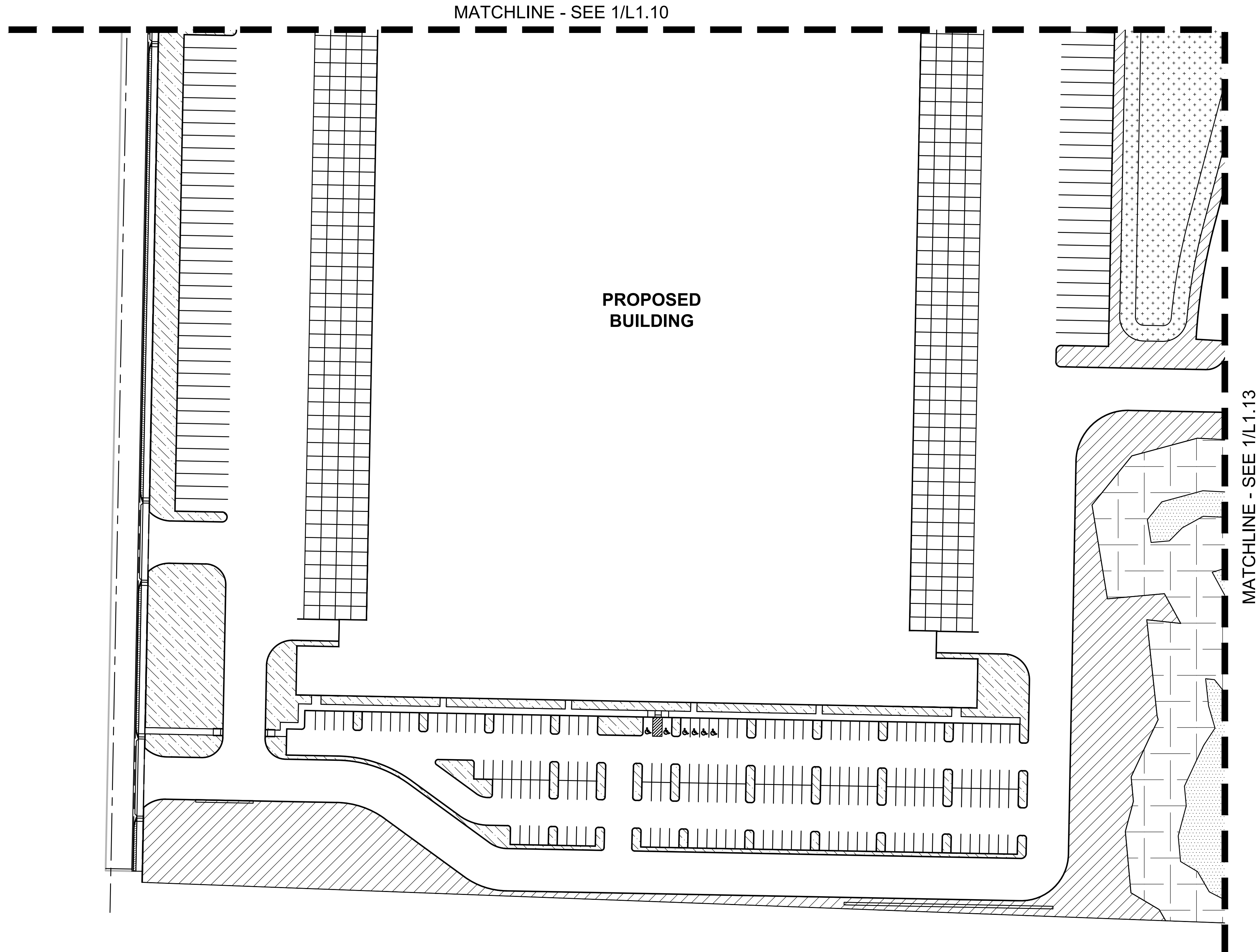
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Delta	Issued As	Issue Date

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**LANDSCAPE
PLAN**

SHEET:

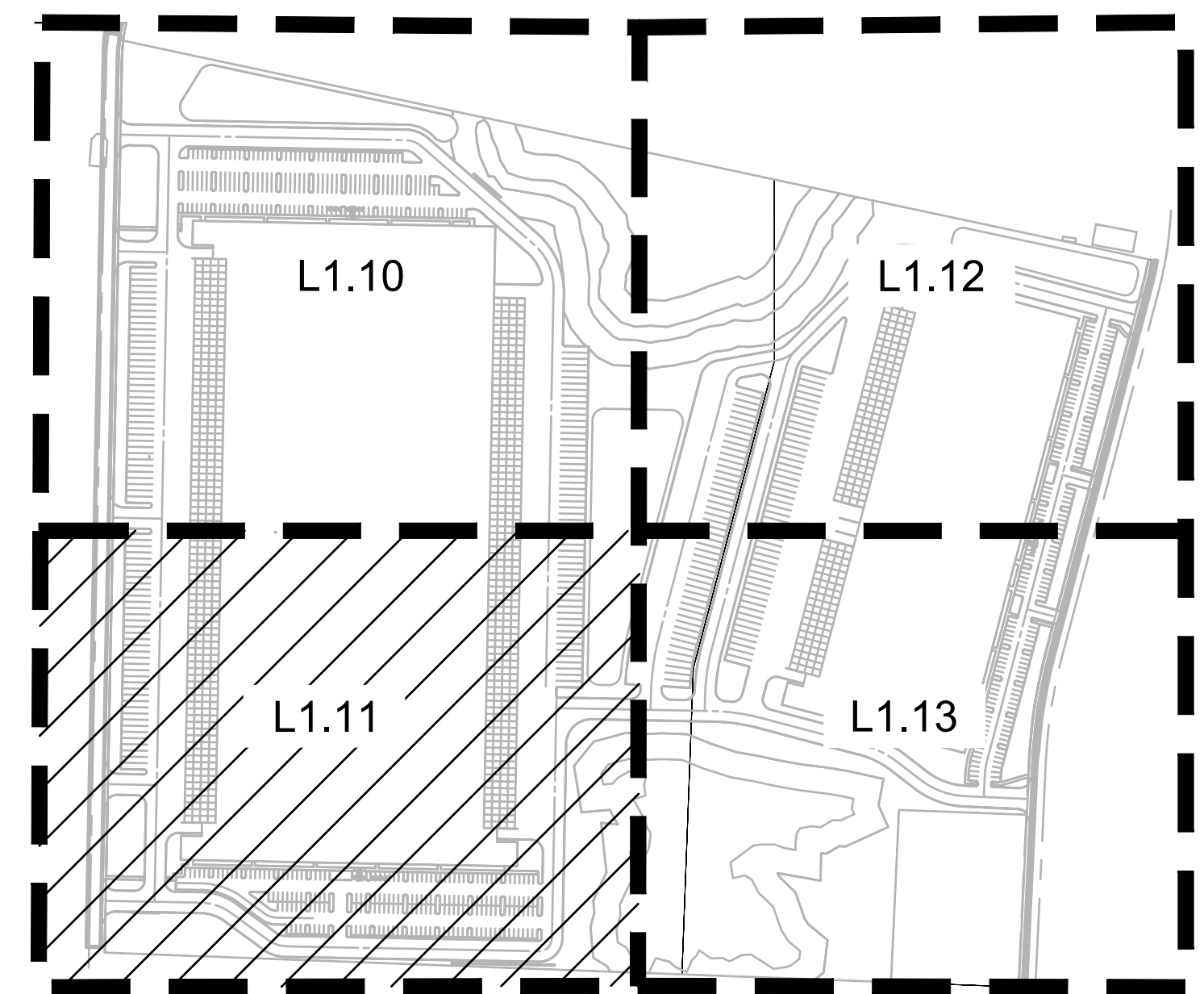
L1.11

JOB NO. **2220334.00**



LANDSCAPE LEGEND

- GENERAL LANDSCAPE
- NATIVE LANDSCAPE
- 50' WETLAND BUFFER
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Delta	Issued As	Issue Date

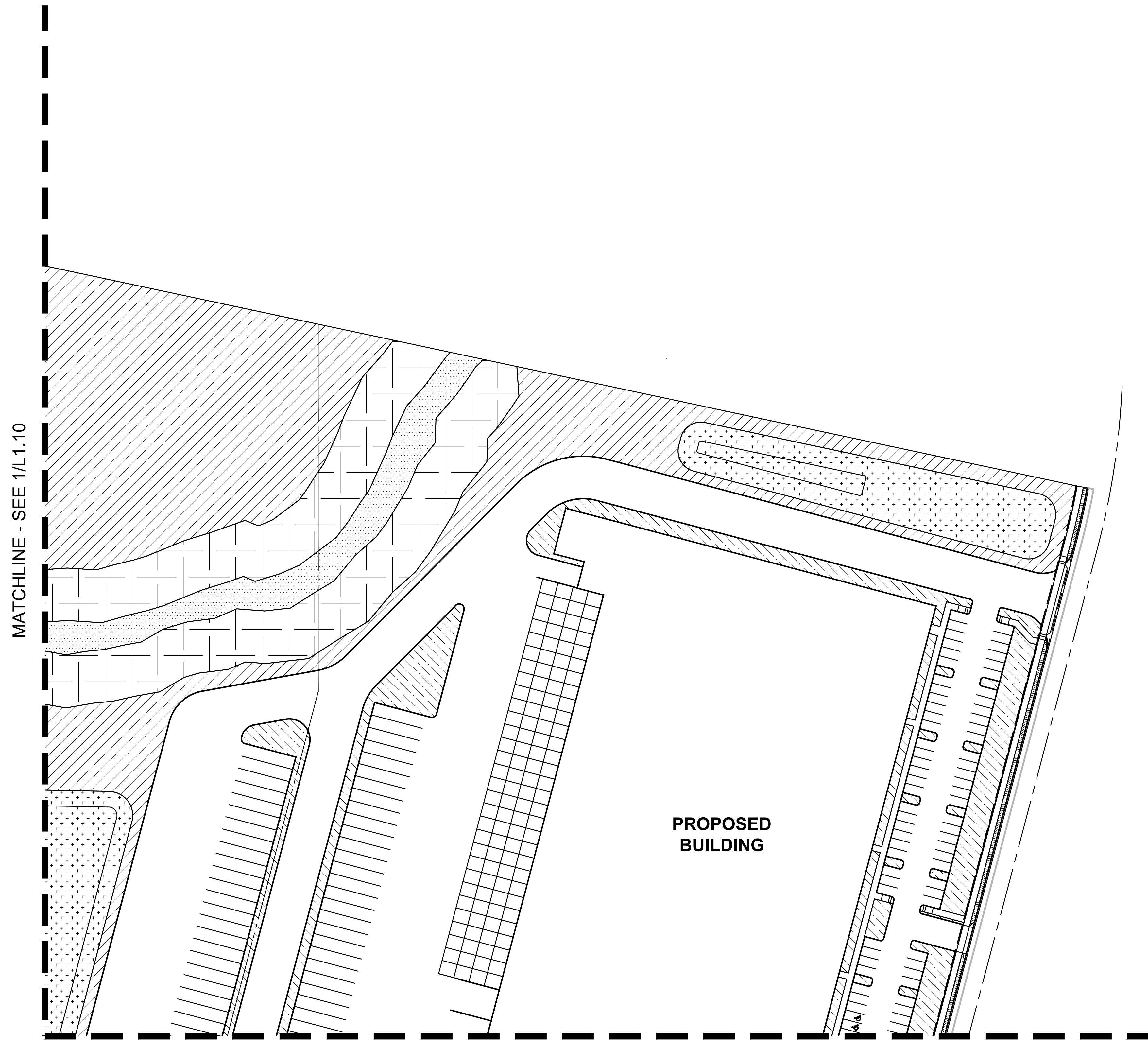
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**LANDSCAPE
PLAN**

SHEET:

L1.12

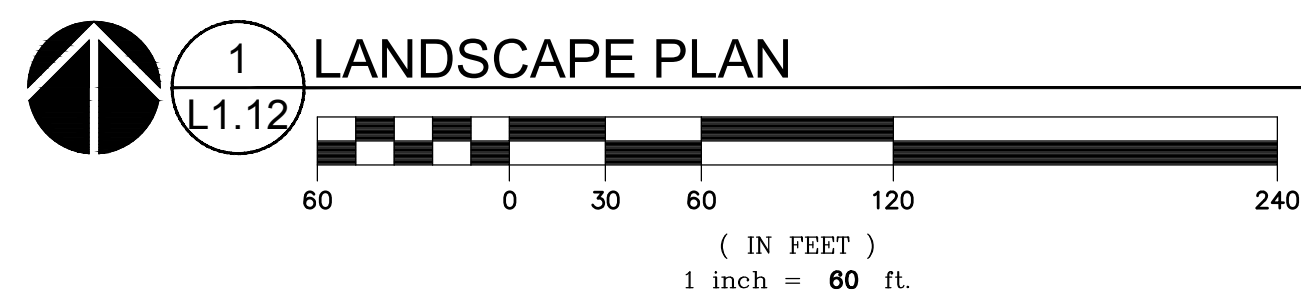
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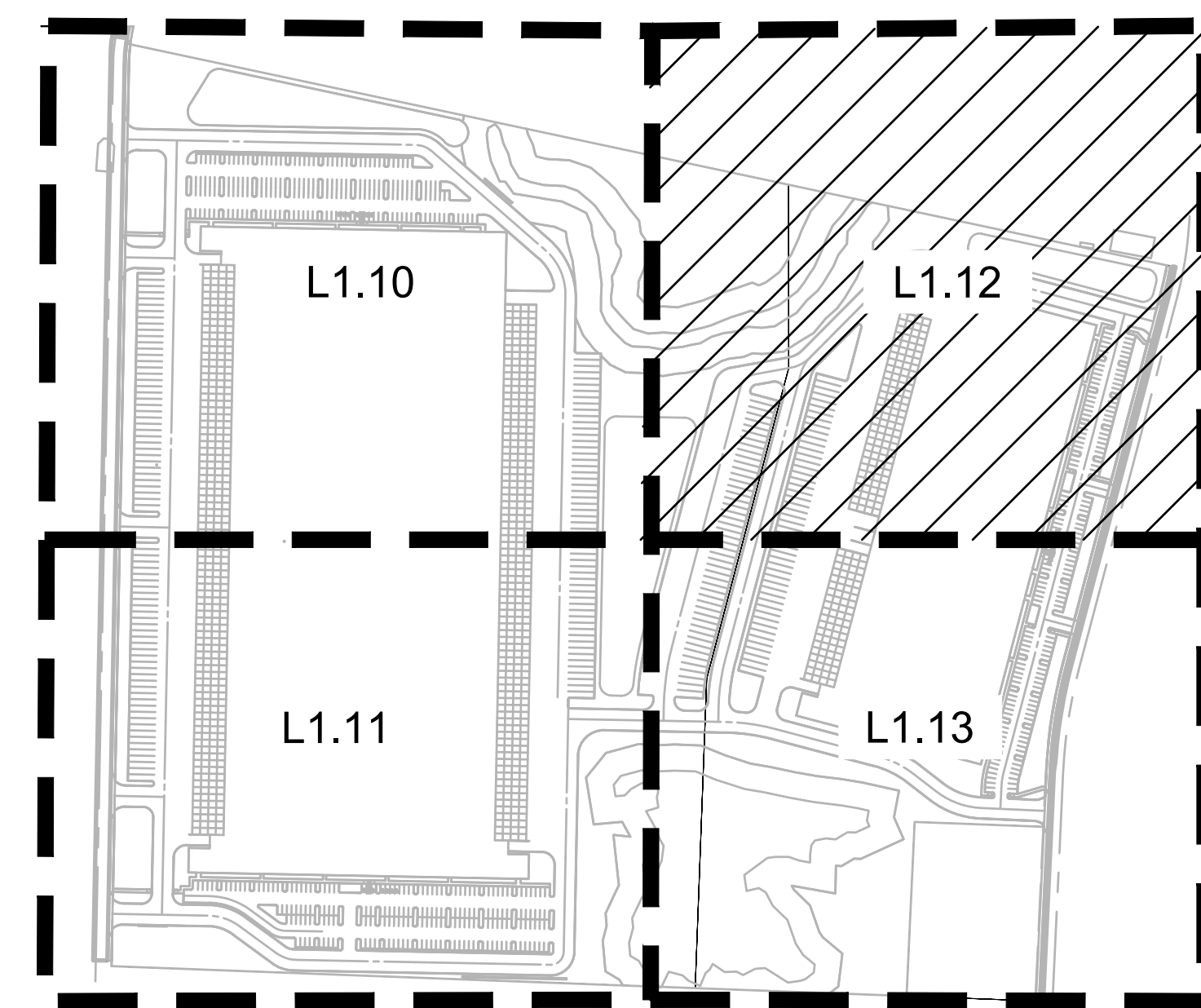
**PROPOSED
BUILDING**

MATCHLINE - SEE 1/L1.13



LANDSCAPE LEGEND

- GENERAL LANDSCAPE
- NATIVE LANDSCAPE
- 50' WETLAND BUFFER
- WETLAND
- RIGHT OF WAY LANDSCAPE
- STORMWATER



KEY MAP

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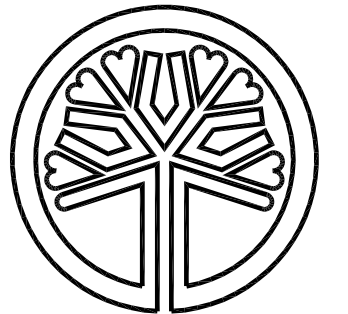
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Delta	Issued As	Issue Date

SHEET TITLE:
**LANDSCAPE
PLAN**

SHEET:

L1.13

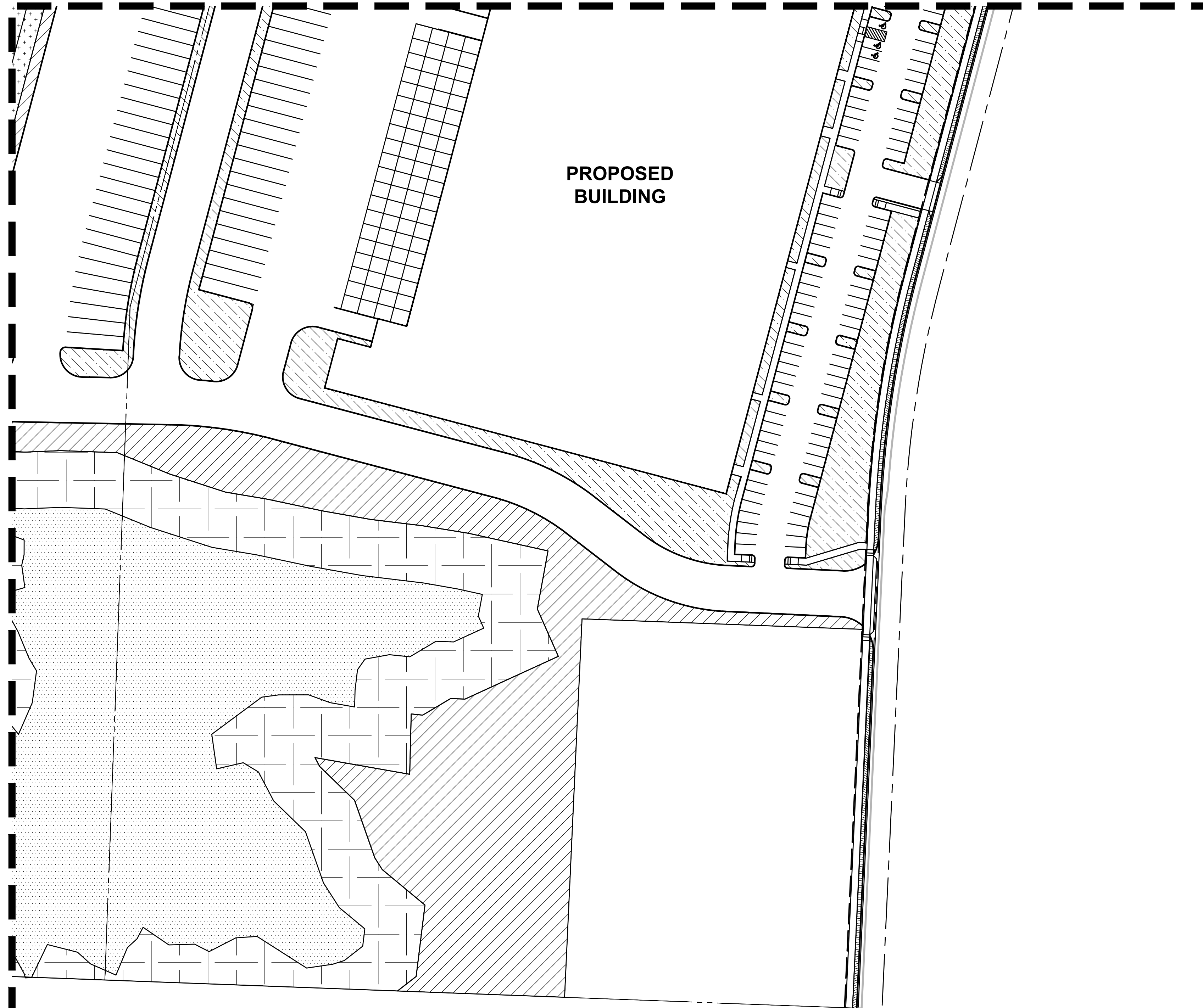
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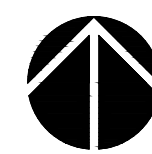
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MATCHLINE - SEE 1/L1.12

MATCHLINE - SEE 1/L1.11



**PROPOSED
BUILDING**



1
L1.13

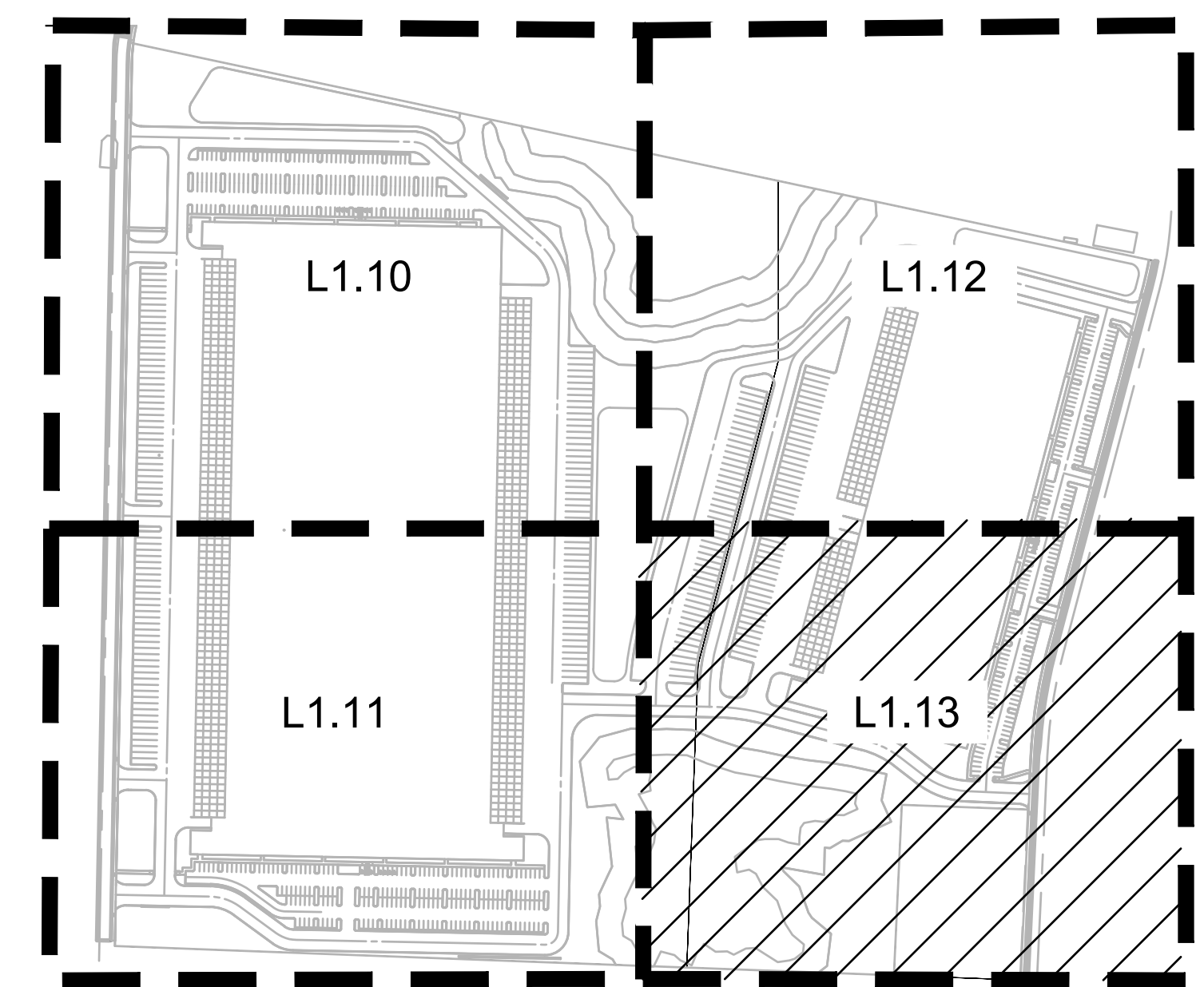
LANDSCAPE PLAN



(IN FEET)
1 inch = 60 ft.

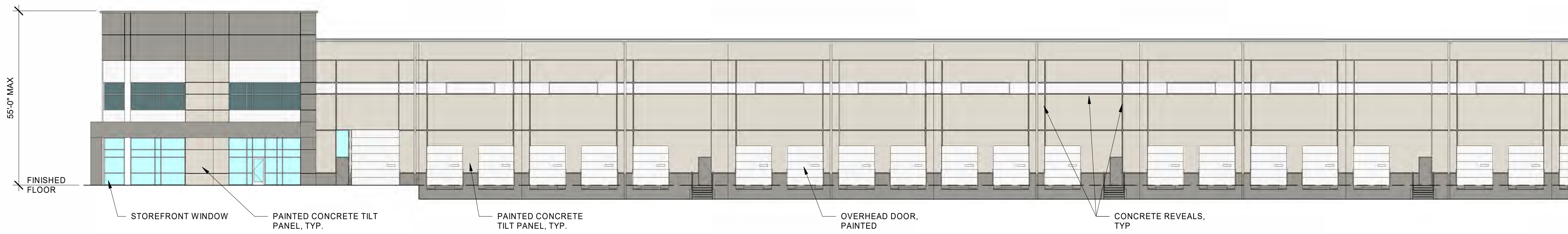
LANDSCAPE LEGEND

- GENERAL LANDSCAPE
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- 50' WETLAND BUFFER
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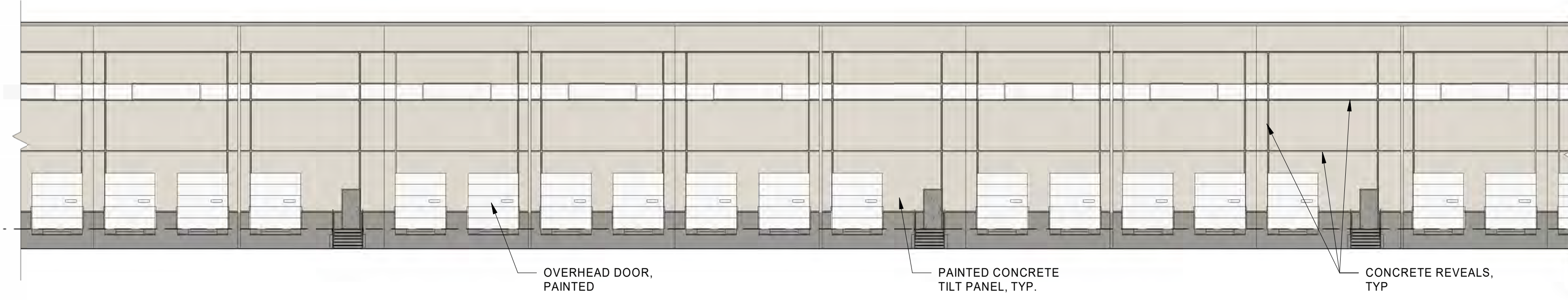


KEY MAP

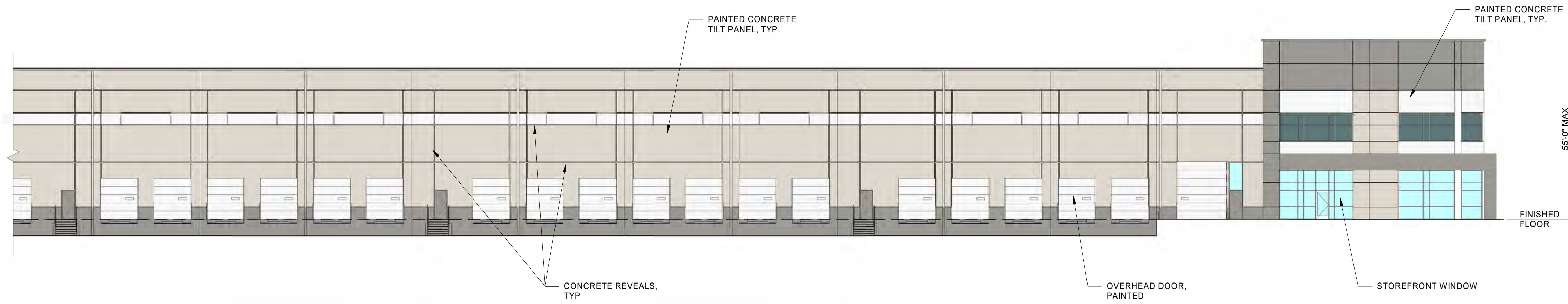
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1 BUILDING A - WEST ELEVATION
A2.10 NTS



2 BUILDING A - WEST ELEVATION
A2.10 NTS



3 BUILDING A - WEST ELEVATION
A2.10 NTS

LEGEND

	P-1 : ELASTOMERIC WALL PAINT, COLOR TBD
	P-2 : ELASTOMERIC WALL PAINT, COLOR TBD
	P-3 : ELASTOMERIC WALL PAINT, COLOR TBD
	VISION GLAZING
	SPANDREL GLAZING

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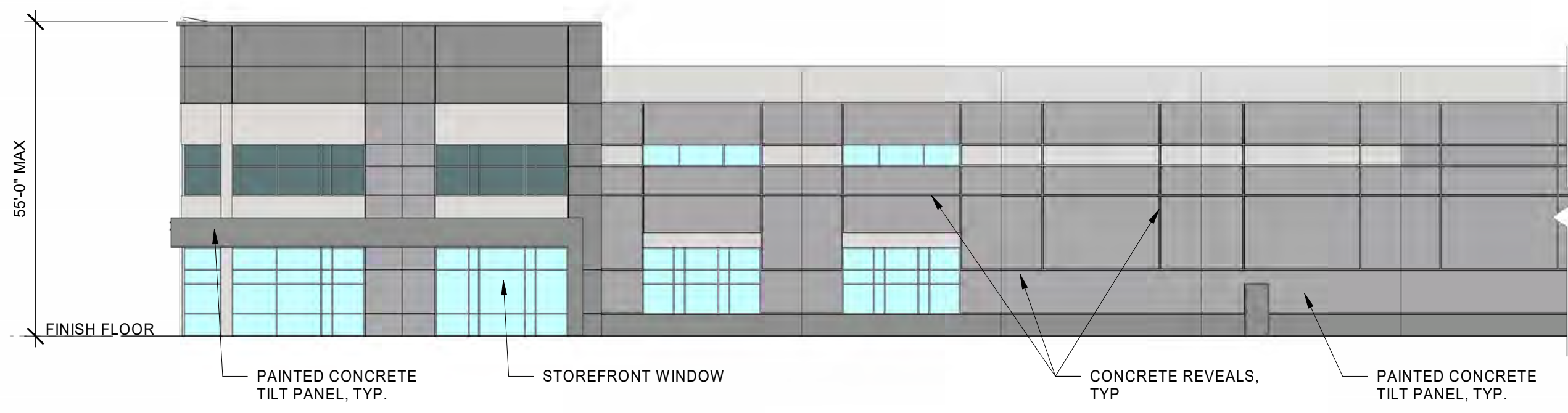
Delta	Issued As	Issue Date

SHEET TITLE:
**BUILDING
ELEVATIONS -
BLDG A**

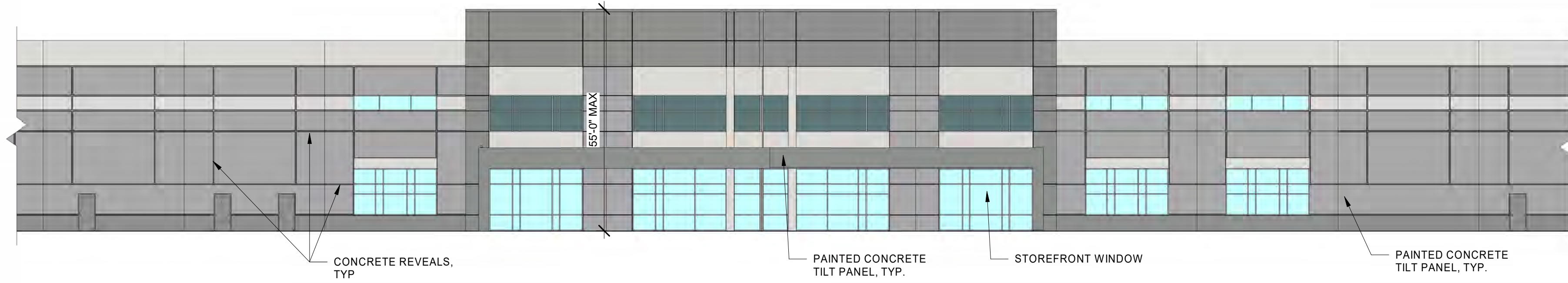
SHEET

A2.10

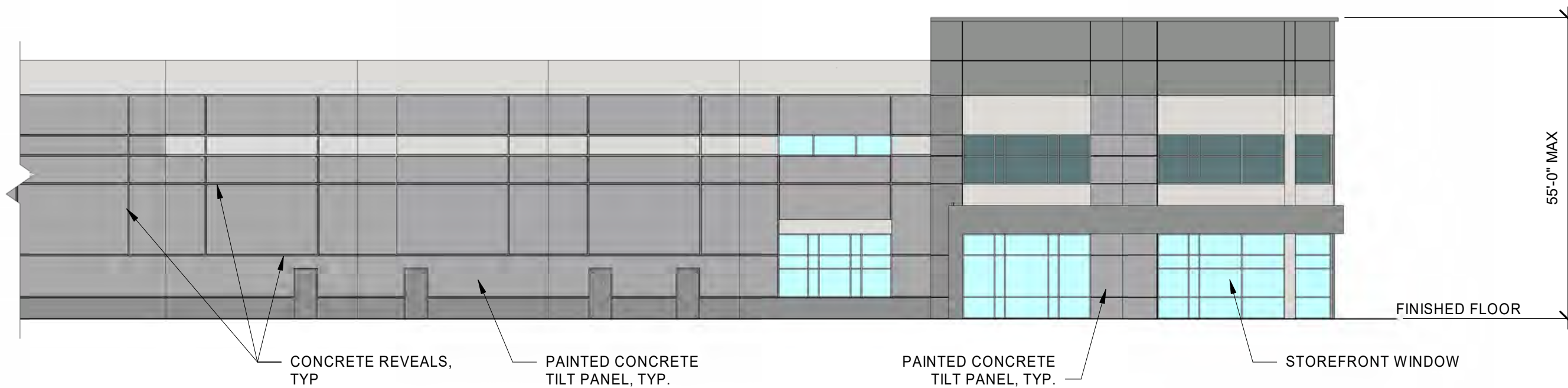
JOB NO. **2220334.00**



1 BUILDING B - EAST ELEVATION
A2.11 NTS




2 BUILDING B - EAST ELEVATION
A2.11 NTS



3 BUILDING B - EAST ELEVATION
A2.11 NTS

LEGEND

	P-1 : ELASTOMERIC WALL PAINT, COLOR TBD
	P-2 : ELASTOMERIC WALL PAINT, COLOR TBD
	P-3 : ELASTOMERIC WALL PAINT, COLOR TBD
	VISION GLAZING
	SPANDREL GLAZING

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Delta	Issued As	Issue Date

SHEET TITLE:
**BUILDING
 ELEVATIONS -
 BLDG B**

SHEET

A2.11

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