BINDING EDGE

PORT OF TACOMA

THORNE ROAD
OFF DOCK CONTAINER YARD
PROJECT NO. 101241.01
CONTRACT NUMBER 071908

PORT COMMISSIONERS:

JOHN McCARTHY
RICHARD MARZANO
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DEANNA KELLER
KRISTIN ANG

PORT STAFF:

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Executive Director

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Director of Engineering

NORMAN GILBERT, P.E.
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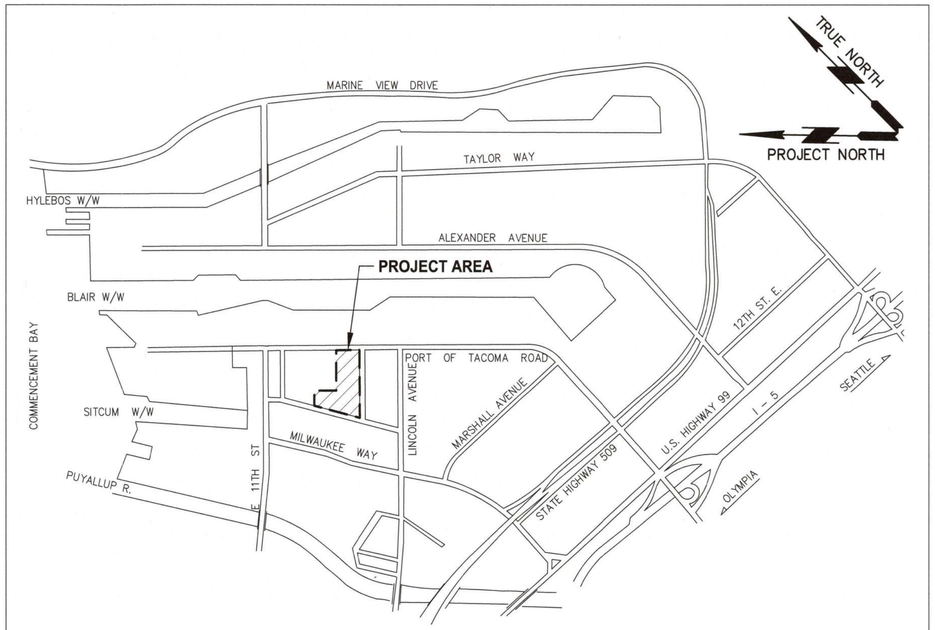

VICINITY MAP NO SCALE PORT OF TACOMA

THIS PROJECT IS FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

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PROJECT ENGINEER:
(SAME AS APPLICANT)

SITE DEVELOPMENT No. S-DEV 23-0193
LAND USE PERMIT No.
COMMERCIAL BUILDEING PERMIT No. (TBD)
ECOLOGY PERMIT AND DNR FOR MONUMENTS:
SEE SHEET V01.01 FOR PRECISE BOUNDARY LINES AND LENGTHS
PROPERTY AREA: 1,038,392 SF OR 28.3 ACRE

CONSULTANTS:

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SITTS & HILL ENGINEERS, INC.
CIVIL ■ STRUCTURAL ■ SURVEYING

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ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:
DIRECTOR ENG. DATE 4/3/25

THORNE ROAD
OFF DOCK CONTAINER YARD
COVER SHEET

6688
G1.01
1 OF 105

EK 4/3/2025			
CHECKED BY DATE			
JT 4/2/2025			
PROJ. ENGR DATE			
Apr 14, 2025			
SITCUM PLAZA			
TACOMA, WA 98401-1837			
PRINTED BY: jtodd Apr 14, 2025			
PORT ADDRESS:ONE SITCUM PLAZA			
DRAWING SCALE: AS NOTED			

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

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ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
Sep 04, 2025
SITCUM PLAZA
TACOMA, WA 98401–1837

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THORNE ROAD
OFF DOCK CONTAINER YARD
SHEET INDEX

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GENERAL NOTES

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT ALL INCLUSIVE. CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE BEGINNING AFFECTED WORK.
2. IN THE EVENT OF CONFLICTING REQUIREMENTS BETWEEN THE CONTRACT DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, REFER TO DIVISION 1 OF THE CONTRACT SPECIFICATIONS FOR GUIDANCE.
3. ALL WORK SHALL CONFORM TO THE SPECIFICATIONS SUPPLEMENTED BY THE CITY OF TACOMA STANDARD DETAILS AND SPECIFICATION WHERE APPLICABLE AND SUPPLEMENTED BY THE CURRENT VERSION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, ENGLISH UNITS. A COPY OF THESE DOCUMENTS SHALL BE KEPT ON SITE BY THE CONTRACTOR DURING CONSTRUCTION. ALL WORK IS ALSO SUBJECT TO CITY OF TACOMA STANDARDS AND SPECIFICATIONS AS NECESSARY.
4. STANDARD PLAN AND TYPE NUMBERS NOTED ON THESE DRAWINGS REFER TO WSDOT STANDARDS, UNLESS OTHERWISE NOTED.
5. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND PROTECT ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CONTRACTOR SHALL VERIFY LOCATION, DEPTH, SIZE, TYPE AND CONDITION OF EXISTING UTILITIES BEFORE CONSTRUCTION.
6. THE CONTRACTOR SHALL HIRE, USE, AND PAY FOR SERVICES OF PRIVATE LOCATING COMPANY PRIOR TO STARTING WORK IN ANY AREA. CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL OBTAIN ALL OVER THE COUNTER PERMITS AND PAY ALL FEES REQUIRED FOR INSTALLATION OF STORM DRAINS, ELECTRICAL WORK, AND OTHER UTILITIES.
8. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE BEFORE STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
9. AS A MINIMUM REQUIREMENT, ALL DISTURBED AREAS WITHIN CITY RIGHT-OF-WAY SHALL BE RETURNED TO THE EQUIVALENT OF THEIR RECONSTRUCTION CONDITION IN ACCORDANCE WITH CITY OF TACOMA STANDARDS.
10. THE CONTRACTOR SHALL KEEP STREETS ADJACENT TO THE SITE CLEAN AT ALL TIMES BY SWEEPING. WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.
11. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL. TRAFFIC DIVERSION, INTERRUPTIONS, AND TEMPORARY SIGNAGE SHALL BE COORDINATED WITH CITY OF TACOMA.
12. SEE V01.01 FOR SURVEY NOTES.

GEOTECHNICAL

1. IF UNSUITABLE SUBGRADE IS FOUND DURING EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE OVER EXCAVATED PER DIRECTION OF THE ENGINEER AND REPLACED WITH GRAVEL BACKFILL COMPACTED TO 95 PERCENT DRY DENSITY PER WSDOT STANDARD SPECIFICATIONS.
2. A GEOTECHNICAL REPORT PREPARED BY HART CROWSER, INC. TITLED "DESIGN REPORT THORNE ROAD CONTAINER YARD – PORT OF TACOMA, TACOMA, WASHINGTON", NO. 19398-00, AND DATED 2/25/2022 IS AVAILABLE FOR REVIEW AS AN APPENDIX TO THE PROJECT MANUAL. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE CONTENTS OF THE REPORT AND MAKE THEIR OWN INTERPRETATION OF ITS CONTENTS.

CODES AND STANDARDS

ALL WORK SHALL CONFORM TO THE MINIMUM REQUIREMENTS FOR THE FOLLOWING CODES AND STANDARDS (PARTIAL LIST):

1. INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION, AS AMENDED AND ADOPTED BY THE CITY OF TACOMA.
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/ANSI 7-10, 2010.
3. AMERICAN CONCRETE INSTITUTE (ACI), BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY, ACI 318-14, 2014.
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, 14TH EDITION.
5. AMERICAN WELDING SOCIETY (AWS), STRUCTURAL WELDING CODE – STEEL, AWS D1.1, 2015.

LIVE LOAD DESIGN CRITERIA

1. ALL UNDERGROUND STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE THE FOLLOWING DESIGN LIVE LOADS:
   a. TOP PICK LOADING:
      - 219 KIP AXLE LOAD, PLUS 30% IMPACT
      - 4 TIRES PER AXLE
      - 230 PSI CONTACT PRESSURE
      - 23" DUAL WHEEL SPACING

REINFORCED CONCRETE

1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301, UON.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE.
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES: ACI 315 AND ACI SP-66.
4. REINFORCING STEEL
   a. ALL REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60.
   b. LAP SPLICE ALL REINFORCING BARS AS NOTED ON SCHEDULE C THIS SHEET.
   c. PROVIDE CORNER BARS AT ALL CORNERS. CORNER BARS SHALL MATCH THE NUMBER, SPACING, AND DIAMETER OF ALL HORIZONTAL REINFORCEMENT AT THE CORNER, UON. TERMINATED STRAIGHT BARS SHALL EXTEND FULL AVAILABLE LENGTH INTO ADJOINING MEMBERS.
   d. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE YIELD STRENGTH OF THE BAR IN TENSION.
   e. REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE (MSP). REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.
   f. ALL HORIZONTAL REINFORCEMENT AT DISCONTINUITIES AND CORNERS SHALL END WITH STANDARD 90 DEGREE HOOKS IN ACCORDANCE WITH ACI 315, UON.
   g. PROVIDE THE FOLLOWING CONCRETE COVER OVER REINFORCEMENT, UON.

CONCRETE AGAINST GROUND:	3"
EXPOSED CONDITIONS:	
#5 BAR AND SMALLER:	1-1/2"
#6 BAR AND LARGER:	2"

WHEN SPLICING BARS OF DIFFERENT SIZES, USE SPLICE LENGTH VALUES FOR SMALLER BARS.

5. PRECAST CONCRETE

		MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS
a.	PRECAST VAULTS	4,500 PSI

6. CAST-IN-PLACE CONCRETE

		MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS	MAX W/C
a.	CAST-IN-PLACE CONCRETE, UON	4,500 PSI	0.45
b.	FENCE POSTS	2,500 PSI	N/A

7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 IN.
8. CONSTRUCTION JOINTS SHALL BE PROVIDED ONLY AS NOTED ON THE DRAWINGS AND AS SPECIFICALLY PERMITTED BY THE ENGINEER.
9. CONCRETE MIX SHALL BE AIR ENTRAINED WITH A TARGET OF 5% +/- 1 1/2%, UON IN THE SPECIFICATIONS.
10. GROUT SHALL BE NON-METALLIC AND NON-SHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS, UON.
11. CONCRETE ANCHORS
    a. USE OF DRILLED ADHESIVE CONCRETE ANCHORS, WHERE NOT SPECIFIED IN THE DOCUMENTS, SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
    b. EPOXY OR ADHESIVE-TYPE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SPECIAL INSPECTION IS REQUIRED FOR ADHESIVE ANCHORS.
    c. ACCEPTABLE ADHESIVES ARE HILTI HIT HY 200, ICE, OR HVA SYSTEMS; OR SIMPSON EPOXY TIE (SET) SYSTEM. INTERNATIONAL CONFERENCE OF BUILDING OFFICIAL (ICBO) OR INTERNATIONAL CODE COUNCIL (ICC) REPORTS SHALL BE SUBMITTED FOR ALL ADHESIVE ANCHOR PRODUCTS.
    d. ACCEPTABLE EXPANSION ANCHORS ARE HILTI KB TZ, SIMPSON STRONG-BOLT2, POWERS POWER-STUD+SD1, OR EQUIVALENT.

SCHEDULE C

BAR SIZE	LAP SPLICE LENGTH IN INCHES	
	OTHER BARS	TOP BARS
#3	19	24
#4	25	32
#5	31	40
#6	37	48
#7	54	70
#8	62	80
#9	70	91
#10	79	102
#11	87	113

NOTES:

1. THE ABOVE SPLICE LENGTHS APPLY TO BARS WITH A MINIMUM SPACING OF 3db INCHES ON CENTER.

   db = BAR NOMINAL DIAMETER
2. DEVELOPMENT LENGTH OF BARS TO BE 77% OF LAP SPLICE LENGTH.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

MISCELLANEOUS STEEL

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (AISC).
2. ALL MISCELLANEOUS STEEL SHAPES AND PLATES, UON SHALL CONFORM TO ASTM A36.
3. ALL HSS SECTIONS SHALL USE ASTM A500 GR B.
4. STEEL PLATE NOTED AS GRADE 50 SHALL CONFORM TO ASTM A572, GRADE GRADE 50.
5. ALL BOLTS SHALL CONFORM TO ASTM A307, UON ON THE DRAWINGS.
6. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55 (TYPICAL), UON.
7. PROVIDE BLEED HOLES IN EMBEDDED PLATES AND SHAPES AT 24-IN, ON CENTER MAXIMUM.
8. ALL MISCELLANEOUS PIPES AND SLEEVES, INCLUDING SLEEVES FOR BOLLARDS, SHALL CONFORM TO ASTM A53, GRADE B.
9. ALL NUTS SHALL BE ASTM A563, UON.
10. ALL WASHERS SHALL BE ASTM F436, UON.
11. ALL STEEL ITEMS SHALL BE PAINTED STANDARD GRAY IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, UON.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED FOR THE WELD AND POSITION SHOWN IN ACCORDANCE WITH AWS AND HAVING CURRENT CERTIFICATION FROM WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO).
2. ALL WELDS SHALL BE PERFORMED WITH THE PROCEDURES PREQUALIFIED OR QUALIFIED IN ACCORDANCE WITH AWS D1.1 AND D1.4.
3. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.
4. WELDING ELECTRODES SHALL BE 70 KSI STRENGTH AND SHALL BE LOW HYDROGEN MATERIAL.
5. ALL FAYING SURFACES OF FABRICATED METAL COMPONENTS EXPOSED TO WEATHER SHALL BE SEAL WELDED.
6. MINIMUM WELD SIZE 3/16", UON.

SPECIAL INSPECTIONS:

SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH IBC 2015, CHAPTER 17 WITH CITY OF TACOMA AMENDMENTS. SEE BELOW FOR INSPECTION SCHEDULE:

MATERIAL	INSPECTION ITEM	REFERENCE STANDARD	CONTINUOUS	PERIODIC
CONCRETE	REINFORCING	ACI 318		X
	EMBEDDED BOLTS			
	VERIFY DESIGN MIX STRENGTH, SLUMP, AIR, TEMPERATURE OF FRESH CONCRETE			
STEEL	MATERIAL VERIFICATION OF BOLTS	AISC 360, SEC A3.3		X
	BOLT INSTALLATION	AISC 360, SEC M2.5		X
	MATERIAL VERIFICATION OF WELD MATERIAL	AISC 360, SEC A3.5 AND APPLICABLE AWS A5 DOCUMENTS		X
	CJP AND PJP GROOVE WELDS	AWS D1.1	X	
	MULTI PASS FILLET WELDS, SINGLE PASS FILLET WELDS >5/16 PLUG AND SLOT WELDS	AWS D1.1	X	
	FILLET WELDS <5/16			X

PROTECTION OF THE ENVIRONMENT

NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841
moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-2222

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
jtodd Apr 02, 2025

APPROVED:
DIRECTOR ENG. DATE
PRINTED BY:
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
GENERAL NOTES

6688
G1.03
3 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	DRAWING SCALE: AS NOTED
M. ID:	101241.01	DAT-HRZ:	VERT:		
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87		

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PORT OF TACOMA FILE: Q:\SEA\10284-02\CADD_Active_SheetSet\1028402-G01.03

BINDING EDGE

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
BMT	BIOFILTRATION MEDIA TRENCH
BOT, BOTT, BTM	BOTTOM
C–	C–CHANNEL
CB	CATCH BASIN
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CTL	CENTERLINE
CLR	CLEAR
COMM	COMMUNICATIONS
CONC	CONCRETE (PORTLAND CEMENT CONCRETE)
COORD	COORDINATE
CSBC	CRUSHED SURFACING BASE COURSE
CU	COPPER
C/C	CENTER TO CENTER
DI, DIP	DUCTILE IRON PIPE
DIA	DIAMETER
DIM	DIMENSION
E	EAST OR EASTING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
ENV	ENVIRONMENTAL
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FT	FEET
G or GA	GAUGE
GALV	GALVANIZED
HMA	HOT MIX ASPHALT
HORIZ OR HOR	HORIZONTAL
IE	INVERT ELEVATION
IN	INCH OR INCHES
KIPS	KILO–POUND (THOUSANDS OF POUNDS)
KSI	KIPS PER SQUARE INCH
LB/FT	POUNDS PER FOOT
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
M	METER
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH OR NORTHING
NAD	NORTH AMERICAN DATUM
NE	NORTHEAST
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OCR	OPTICAL CHARACTER RECOGNITION
OD	OUTSIDE DIAMETER
OFCB	OVERFLOW CATCH BASIN
OWS	OIL–WATER SEPARATOR
PG	PERFORMANCE GRADE
PORT	PORT OF TACOMA
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PVC	POLYVINYL CHLORIDE
R	RADIUS
REINF	REINFORCEMENT
REQ'D	REQUIRED
ROW	RIGHT OF WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAINAGE
SE	SOUTHEAST
SIM	SIMILAR
SPA	SPACING OR SPACED
SQ	SQUARE
ST	STREET
STL	STEEL
STD	STANDARD
SW	SOUTHWEST

ABBREVIATIONS (CONT'D)

TC	TOP OF CONCRETE
TF	TRACK FEET
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
T&B	TOP AND BOTTOM
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VERT OR V	VERTICAL
WIM	WEIGH IN MOTION
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WUT	WASHINGTON UNITED TERMINAL
WWM	WELDED WIRE MESH
w/	WITH
W/C	WATER/CEMENT RATIO
W/W	WATERWAY
&	AND
@	AT
*	ASTERISK
L	ANGLE
℄	CENTERLINE
Ø	NOMINAL DIAMETER OR PHASE
°	DEGREES
'	MINUTES OR FEET
#	NUMBER OR POUNDS
%	PERCENT
℗	PROPERTY LINE OR PLATE
"	SECONDS OR INCH

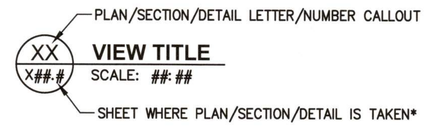
LEGEND

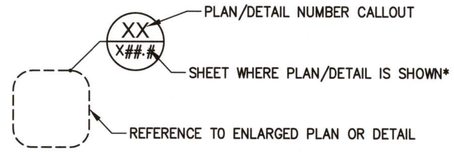
EXISTING	PROPOSED	DESCRIPTION
		FOUND MONUMENT AS NOTED
		SET REBAR W/ CONTROL CAP
		SANITARY SEWER MANHOLE
		UTILITY CLEAN OUT
		STORM MANHOLE
		STORM CATCH BASIN
		STORM CULVERT
		WATER BACKFLOW PREVENTER
		WATER MANHOLE
		WATER VALVE
		WATER METER
		FIRE HYDRANT (PROPOSED WITH BOLLARD CAGE)
		WATER VAULT
		FIRE DEPARTMENT CONNECTION
		WATER BLOW OFF
		POST INDICATOR VALVE
		IRRIGATION CONTROL VALVE
		GAS VALVE
		GAS METER
		POWER METER
		POWER CABINET
		UTILITY POLE
		GUY ANCHOR
		JUNCTION BOX
		POWER VAULT
		POWER TRANSFORMER
		POWER MANHOLE
		LIGHT POLE
		TRAFFIC LOOP
		UTILITY VAULT
		UTILITY MANHOLE
		COLUMN
		BOLLARD
		UTILITY POLE
		SIGN
		TRAFFIC SIGNAL
		MONITORING WELL
TPN		TAX PARCEL NUMBER
		TELECOM VAULT
		TELECOM MANHOLE
		TELECOM CABINET
		MAILBOX
SD	SD	STORM DRAIN LINE
SS SS	SS SS	SANITARY SEWER LINE
W W	W W	BURIED WATER LINE
	W W	NON–POTABLE WATER LINE
NGAS	NGAS	BURIED GAS LINE

LEGEND (CONT'D)

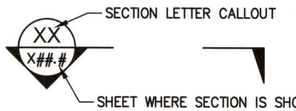
EXISTING	PROPOSED	DESCRIPTION
BP BP		BURIED POWER LINE
BP–R BP–R		RECORD BURIED POWER
BT BT		BURIED TELECOM LINE
BT–R BT–R		RECORD TELECOM LINE
AP AP		OVERHEAD POWER LINE
		CHAIN LINK FENCE
		WOOD OR SPLIT RAIL FENCE
		RAILROAD TRACKS
		CONCRETE SURFACE
	OR	ASPHALT SURFACE

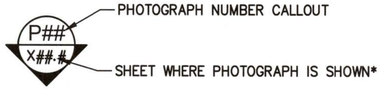
REFERENCE CALLOUTS





*NOTE: DASH (–) INDICATES SECTION OR DETAIL FROM SAME SHEET





NOTES:

1. ADDITIONAL LEGEND FOR SURVEY ITEMS SHOWN ON V01.01.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
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600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-1022

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025 CHECKED BY DATE
JT 4/2/2025 PROJ. ENGR DATE
Todd Apr 02, 2025 DIRECTOR ENG. DATE
APPROVED:

THORNE ROAD
OFF DOCK CONTAINER YARD
LEGEND & ABBREVIATIONS

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT–HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87

PRINTED BY: jtodd
SECTION: 34
PORT ADDRESS:
DRAWING SCALE: AS NOTED

6688
G1.04
4 OF 105

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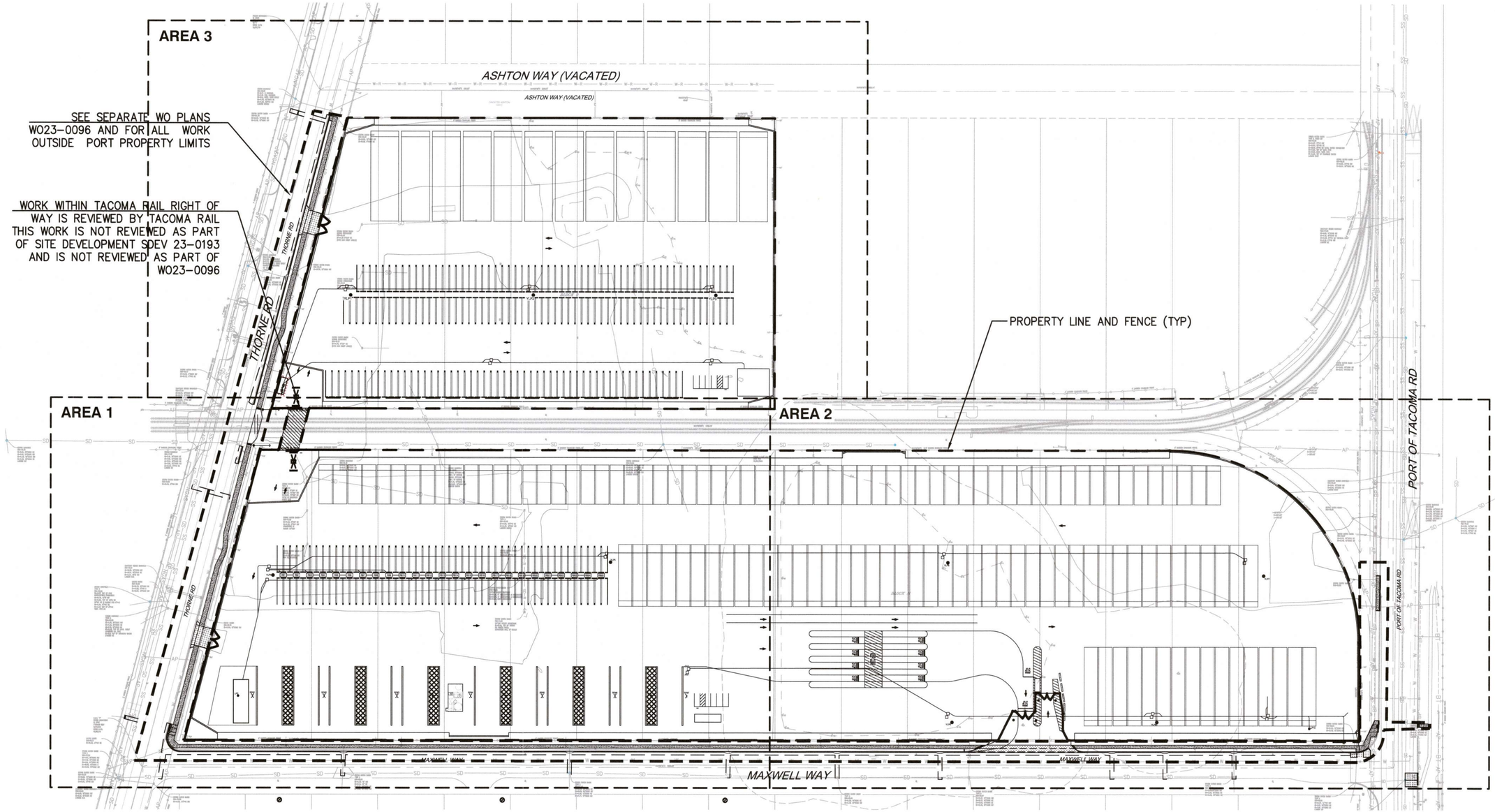
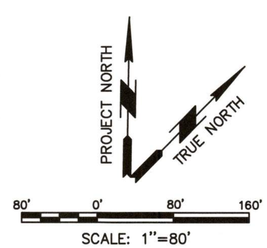
BINDING EDGE



SITE - OVERALL PLAN

SCALE: 1" = 80'



SCALE: 1"=80'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

PORT OF TACOMA FILE: Q:\SEA\10284-02\CADD_Active_SheetSet\10284002-G02.00

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APPROVED:

DIRECTOR ENG. DATE

EK	4/3/2025		
CHECKED BY	DATE		
JT	4/2/2025		
PROJ. ENGR	DATE		

PRINTED BY: jtodd Apr 02, 2025

PORT ADDRESS:

DRAWING SCALE: AS NOTED

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE ACCESS AND PHASING

6688
G2.00
5 OF 105

CONT/CONS:	071908	TOWNSHIP:	21N	RANGE:	3E
M. ID:	101241.01	DAT-HRZ:		VERT:	
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87	SECTION:	34

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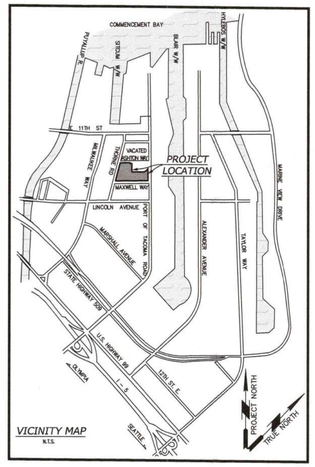
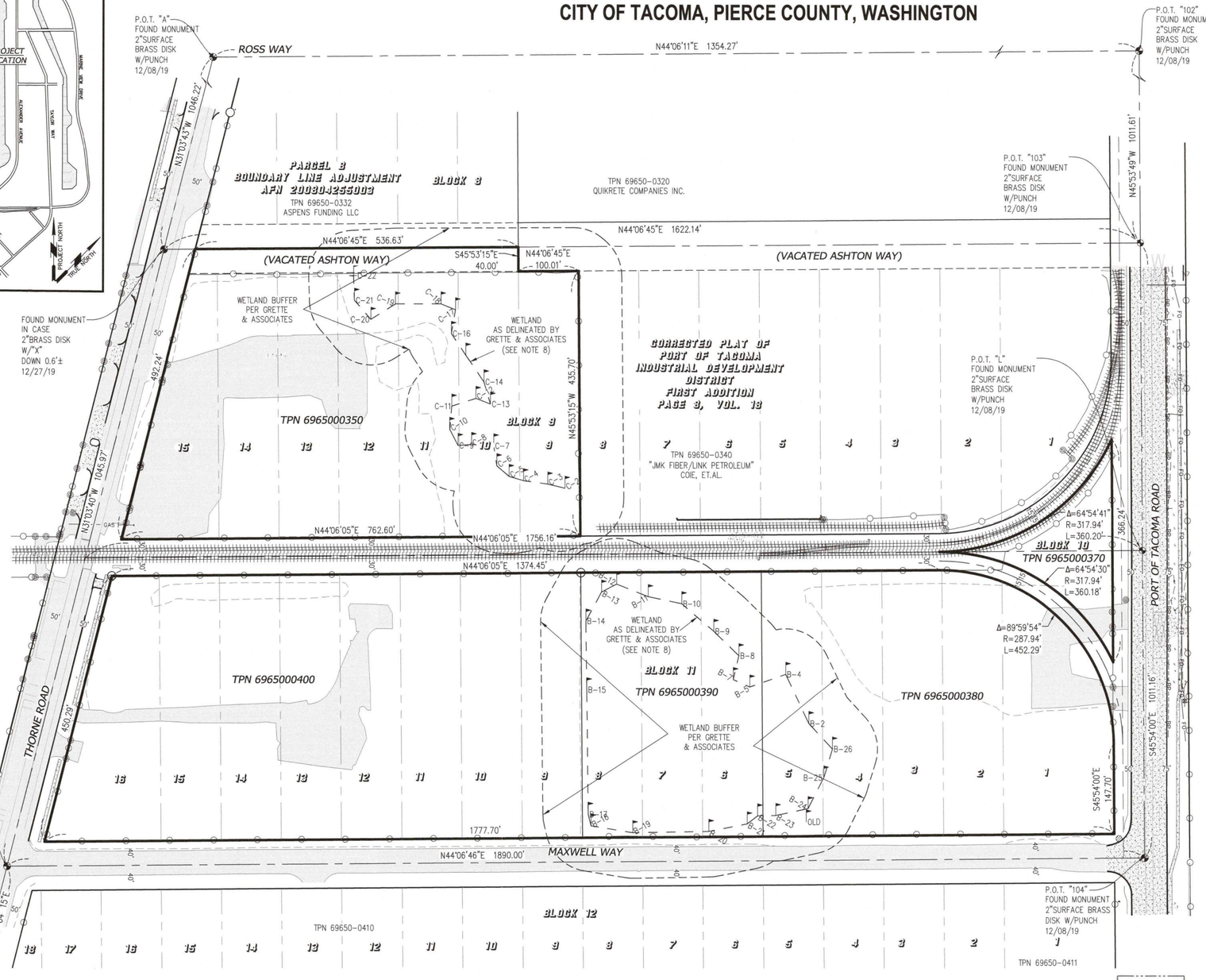
BOUNDARY AND TOPOGRAPHIC SURVEY
PORT OF TACOMA THORNE ROAD OFF-DOCK FACILITY
A PORTION OF THE S.E. 1/4 OF SECTION 34, TOWNSHIP 21 NORTH, RANGE 3 EAST, W.M., CITY OF TACOMA, PIERCE COUNTY, WASHINGTON



VICINITY MAP
N.T.S.



HORIZONTAL SCALE: 1"=100'
100 0 100 200

⚠ HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2011 (PER 2016 PORT OF TACOMA SURVEY CONTROL MAP)

MEASURED NORTH 44°06'46" EAST BETWEEN MONUMENTS "F" AND #104 LOCATED ON MAXWELL WAY AT THE INTERSECTIONS OF THORNE ROAD AND PORT OF TACOMA ROAD.

PORT OF TACOMA MONUMENT "F", NAD 83/2011; PUBLISHED VALUE:
N: 708403.2190
E:1167547.6419

PORT OF TACOMA MONUMENT "104", NAD 83/2011; PUBLISHED VALUE:
N: 709760.1848
E:1168863.2233

TO CONVERT TO CITY OF TACOMA HORIZONTAL DATUM, THE MONUMENT COORDINATE VALUES WOULD BE:

PORT OF TACOMA MONUMENT "F", CALCULATED VALUE PER CITY-OF-TACOMA HORIZONTAL DATUM* (NAD 83/91):
N: 708402.8711
E:1167547.5495

PORT OF TACOMA MONUMENT "104", CALCULATED VALUE PER CITY-OF-TACOMA HORIZONTAL DATUM* (NAD 83/91):
N: 709759.8533
E:1168863.1139

*ESTABLISHED UTILIZING FIELD-LOCATED CITY-OF-TACOMA MONUMENT #552 AND #555.

⚠ VERTICAL DATUM

MLLW (PER PORT OF TACOMA 2016 SURVEY CONTROL MAP)

TIDE 22 1933 BENCHMARK: LOCATED AT NE CORNER OF 11TH ST. BRIDGE AT THE INTERSECTION OF E. 11TH ST. AND MILWAUKEE WAY
ELEVATION = 19.18
(BASED ON 1983-2001 TIDAL EPOCH)

SITE TEMPORARY BENCHMARK:
P.O.T. MONUMENT #104 AT INTERSECTION OF PORT OF TACOMA ROAD AND MAXWELL WAY
ELEV=17.59

TO CONVERT TO NGVD29 CITY OF TACOMA DATUM, REDUCE ALL ELEVATION VALUES BY 5.96 FEET (-5.96); ACCORDING TO TACOMA PUBLIC WORKS 2016 VERTICAL DATUM WORKSHEET.

SITE DATA

TAX PARCEL NOS. 6965000410, 6965000411, 6965000423
AREA: 18.6± ACRES

NOTES

1. EQUIPMENT USED: TOPCON QS ROBOTIC TOTAL STATION
2. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH THE FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332-130-090. ALL MEASUREMENTS WERE MADE WITH A TOPCON QS ROBOTIC TOTAL STATION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON (R.C.W.) 58.09 AND THE WASHINGTON ADMINISTRATIVE CODE (W.A.C.) 332-130, THIS SURVEY MAY DEPICT OCCUPATIONAL INDICATORS THAT DIFFER FROM THE DEEDED LOT LINES. THESE INDICATORS, IF AT ALL PRESENT, MAY REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT PURPORT TO RESOLVE SUCH ITEMS.
4. FIELD WORK PERFORMED IN NOVEMBER AND DECEMBER 2019, UNDER SITTS & HILL PROJECT NUMBER 18654.
5. UTILITIES AS SHOWN HEREON ARE BASED ON FIELD SURVEY OBSERVATION OF UTILITY LOCATE SERVICES PERFORMED BY MOUNTAIN VIEW LOCATING SERVICES LLC. IN NOVEMBER 2019 FOR THIS SURVEY. THIS HAS BEEN SUPPLEMENTED BY PUBLIC RECORDS. RECORD UTILITY LINES SHOWN HEREON ARE DEPICTED WITH THE STANDARD LINETYPE WITH A "- R" AS SHOWN IN THE LEGEND. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY AND PAINTED UTILITY LOCATE LINES. COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA IS CONSISTENT WITH QUALITY LEVEL (B) OF THE ASCE STANDARD GUIDELINES 38-02.
6. SITTS & HILL ENGINEERS, INC. HAS RELIED UPON TITLE INFORMATION NOTED IN COMMITMENT FOR TITLE INSURANCE PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, GUARANTEE NUMBER 3377765, DATED 01/02/2020. IN PREPARATION OF THIS SURVEY, SITTS AND HILL ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS SITTS AND HILL ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND/OR DISCLOSED BY SAID TITLE COMPANY'S ORDER. SITTS & HILL ENGINEERS, INC. HAS RELIED WHOLLY ON SAID TITLE COMPANY'S REPORT AND THEREFORE QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. THIS SURVEY COMPLIES WITH W.A.C. 332-130-145. THE CONTOURS DEPICTED HEREON ARE BASED ON DATA FROM DIRECT FIELD MEASUREMENTS. SPOT ELEVATIONS ARE BASED ON DIRECT FIELD MEASUREMENTS AND ARE DEPICTED FOR REFERENCE. THE PURPOSE OF THIS TOPOGRAPHIC MAP IS TO SERVE AS A BASE MAP FOR CONTEMPLATED SITE IMPROVEMENTS AND DESIGN.
8. WETLAND FLAG LOCATIONS SHOWN HEREON REPRESENT FIELD MEASURED POSITIONS AS DELINEATED BY GRETTE & ASSOCIATES IN 2019. WETLAND BUFFERS SHOWN HEREON ARE PER INFORMATION PROVIDED BY GRETTE & ASSOCIATES IN 2022.

LEGAL DESCRIPTIONS

THE LAND IN THE COUNTY OF PIERCE, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A:

LOTS 9 THROUGH 15, BLOCK 9, PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON;

TOGETHER WITH THAT PORTION OF VACATED ASHTON WAY BETWEEN BLOCKS 8 AND 9, ABUTTING LOTS 10 TO 15, BY ORDINANCE NO. 21416, RECORDED FEBRUARY 23, 1993 UNDER RECORDING NO. 9302230756, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL B:

BLOCK 10, PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, ACCORDING TO THE PLAT RECORDED IN VOLUME 18 OF PLATS, AT PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL C:

LOTS 1 THROUGH 5, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL D:

LOTS 6 THROUGH 8, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL E:

LOTS 9 THROUGH 16, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

KEY MAP
N.T.S.

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

sitts&hill
CIVIL | STRUCTURAL | ARCHITECTURAL | SURVEY
2401 SOUTH 35TH STREET, SUITE 200, TACOMA, WA 98409
PHONE: (253) 472-3448 | FAX: (253) 474-5709
http://www.sittsandhill.com

MARK:	REVISION:	BY:	APPR:	DATE:
⚠	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR — SCHILLING — STATE OF WASHINGTON — 21966 — 01-12-24

CHECKED BY	DATE
PROJ. ENGR	DATE
sanderc Sep 12, 2024	
PORT ADDRESS:ONE SITCUM PLAZA	
TACOMA, WA 98401-1837	

APPROVED:
DIRECTOR ENG. DATE 9-23-24

THORNE ROAD OFF-DOCK FACILITY
TOPOGRAPHIC SURVEY

TOWNSHIP:	RANGE:	SECTION:	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

V01.01
1 OF 13

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BINDING EDGE

PORT OF TACOMA FILE: O:\18600\18654\Drawings\18654 - V01.01

BINDING EDGE

MATCHLINE - SEE SHEET V01.09

SANITARY SEWER MANHOLE
RIM=16.61
IE=10.33, 15"CONC NW
IE=10.31, 15"CONC SE
IE=11.14, 6" SW
LADDER S.W.

CATCH BASIN
RIM=15.99
IE=12.72, 12"CONC NE
IE=14.58, 8"PVC S
IE=12.57, 12"CONC SW

STORM MANHOLE
TYPE II
RIM=16.84
IE=10.97 TOP OF PIPE
INTERCEPTING STRUCTURE
IE=10.74, 18"DI SW
IE=12.24, TOP OF 18"DI NE
18"DIP NE IS SLEEVE FOR 6"PVC
IE=11.34, 6"PVC NE
IE=14.34 TOP OF 6"PVC
VERT. PIPE NE

STORM MANHOLE
TYPE II
RIM=16.86
IE=7.33, 36"CONC NW
IE=7.34, 36"CONC SE
IE=9.76, 12"CONC NE
IE=11.60, TOP OF CONC. SHELF
COVERING S.E. PIPE
IE=12.2 TOP OF STANDING WATER
LADDER SE

CATCH BASIN
RIM=16.18
IE=13.96, 12"CONC SW

THORNE ROAD

6' BARBED CHAINLINK FENCE

450.29'

TPN 6965000400

BLOCK 11

MATCHLINE - SEE SHEET V01.03

P.O.T. "F"
FOUND MONUMENT
IN CASE
2"BRASS DISK
W/PUNCH
DOWN 0.4'±
12/08/19

CATCH BASIN
RIM=16.11
IE=15.38, 4"PVC SE

STORM MANHOLE
TYPE II
RIM=17.24
IE=7.64, 36"CONC NW
IE=7.78, 36"CONC SE
IE=8.21, 24"CONC NE
IE=10.65, 12"CONC E
IE=12.06, 12"CONC SW

STORM CATCH BASIN
RIM=16.28
IE=12.69, 12"CONC NE
IE=12.94, 12"CONC SW
IE=14.81, 3"PVC NW

SANITARY SEWER MANHOLE
RIM=16.60
IE=9.58, 15"CONC NW
IE=9.28, 15"CONC SE
LADDER S.W.

8' BARBED CHAINLINK FENCE

1777.70'

MAXWELL WAY

STORM MANHOLE
TYPE II
RIM=18.90
IE=11.22, 12" NW
IE=11.14, 12" SE
IE=9.92, 24"CONC NE
IE=9.92, 24"CONC SW

STORM CATCH BASIN
RIM=15.98
IE=14.00, 12"PVC SW

8' CHAINLINK FENCE

BLOCK 12

HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "PW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IR IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- X" CW COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- BURIED WATER LINE
- RECORD WATER LINE
- BURIED GAS LINE
- BURIED POWER LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

KEY MAP
N.T.S.

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1	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR — STATE OF WASHINGTON — SCHILLING — 01.12.24

CHECKED BY	DATE
PROJ. ENGR	DATE
Marc Sep 12, 2024	
SITCUM PLAZA	
TACOMA, WA 98401-1837	

APPROVED:
DIRECTOR ENG. — DATE 9-27-24

PRINTED BY: sanderc
PORT ADDRESS: ONE SITCUM PLAZA
DRAWING SCALE: AS NOTED

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

TOWNSHIP:	RANGE:	SECTION:	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

V01.02
2 OF 13

CONT/CONS:
M. ID:
PHASE:

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BINDING EDGE

MATCHLINE - SEE SHEET V01.08

STORM CATCH BASIN
RIM=15.14
24"CMP ROUND STUCTURE
IE=12.19, 8" NW (CAPPED & SUBMERGED)
IE=12.94, 8" SE (CAPPED & SUBMERGED)
IE=11.94, BOTT. STRUCTURE

STORM CATCH BASIN
RIM=14.91
24"CMP ROUND STRUCTURE
IE=12.06, TOP OF DEBRIS
NO VISIBLE PIPES,
STRUCTURE FULL OF WATER

TPN 6965000400

BLOCK 11

TPN 6965000400

MATCHLINE - SEE SHEET V01.02

MATCHLINE - SEE SHEET V01.04

13" CW

WETLAND BUFFER
PER GRETTE
& ASSOCIATES

14 13 12 11 10 9

8' BARBED CHAINLINK FENCE

1777.70'

MAXWELL WAY

MAXWELL WAY

STORM MANHOLE
TYPE II
RIM=17.42
IE=10.62, 24"CONC NE
IE=10.69, 24"CONC SW
IE=11.69, 12"CONC SE
IE=11.77, 12"CONC NW

HORIZONTAL SCALE: 1"=20'
20 0 20 40

KEY MAP
N.T.S.

V01.13 V01.10 V01.11 V01.12 V01.09 V01.08 V01.07 V01.06 V01.02 V01.03 V01.04 V01.05
TACOMA ROAD
VACATED ASHTON WAY
PORT OF TACOMA ROAD
MAXWELL WAY

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- BURIED WATER LINE
- RECORD WATER LINE
- BURIED GAS LINE
- BURIED POWER LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

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REGISTERED PROFESSIONAL LAND SURVEYOR SCHILLING STATE OF WASHINGTON 09-12-24

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sanderc Sep 12, 2024	

APPROVED:
DIRECTOR ENG. DATE

PRINTED BY: sanderc Sep 12, 2024
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837
DRAWING SCALE: AS NOTED

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

V01.03

3 OF 13

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE:	PARCEL:		

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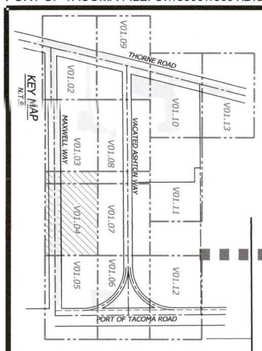

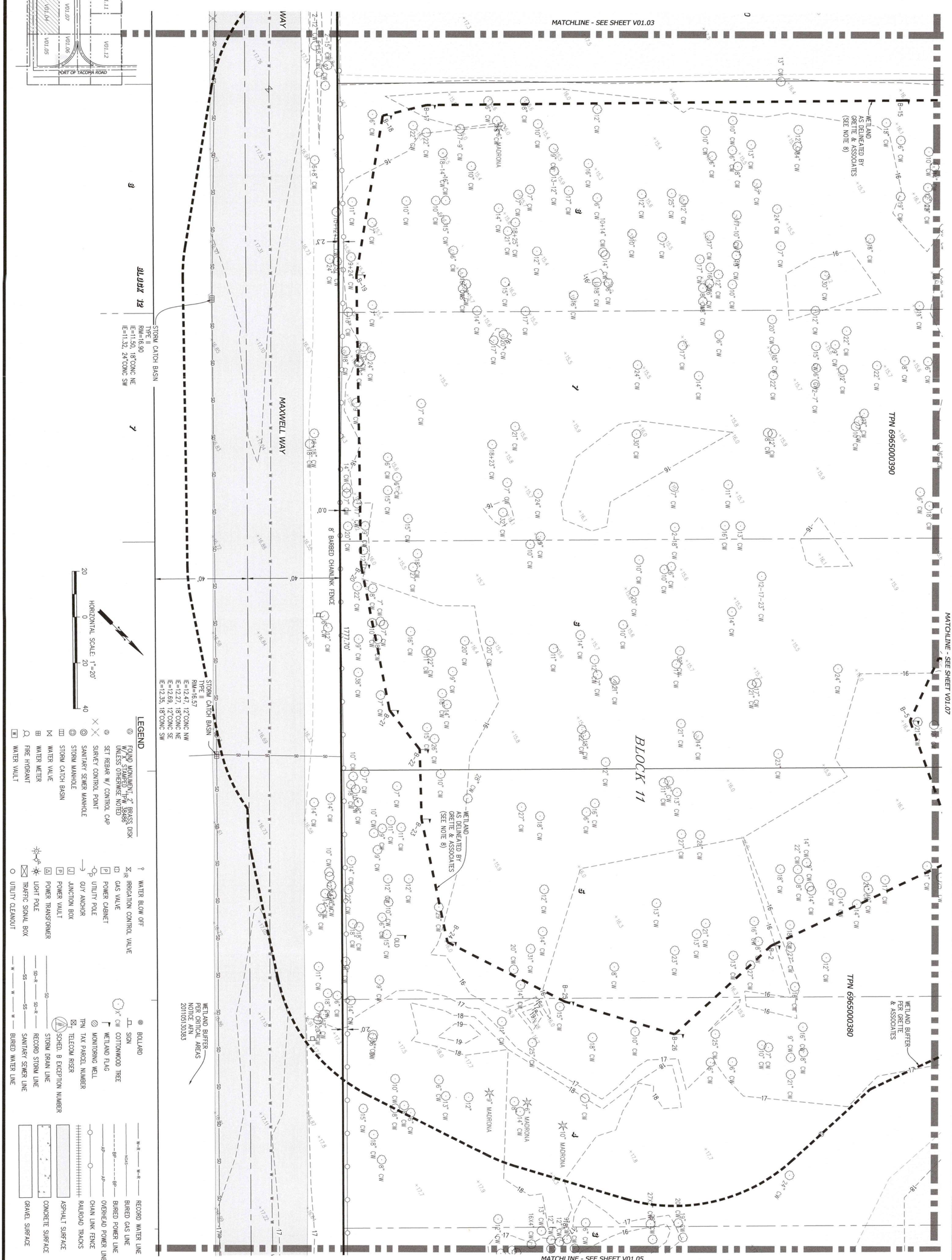

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/ X STAMPED "TPW 35486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- 1' CW COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- SCHED. B EXCEPTION NUMBER
- TELECOM RISER
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- BURIED WATER LINE
- RECORD WATER LINE
- BURIED GAS LINE
- BURIED POWER LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

V01.04 4 OF 13	**THORNE ROAD OFF-DOCK FACILITY** TOPOGRAPHIC SURVEY	APPROVED: DIRECTOR ENG. DATE	CHECKED BY DATE PROJ. ENGR DATE
CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	PRINTED BY: sanderc Sep 12, 2024
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837

09-12-24

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BINDING EDGE

MATCHLINE - SEE SHEET V01.04

MATCHLINE - SEE SHEET V01.06

TPN 6965000380

BLOCK 11

BLOCK 12

MAXWELL WAY

8' BARBED CHAINLINK FENCE

6' BARBED CHAINLINK FENCE

S45°54'00"E 147.70'

1777.70'

STORM CATCH BASIN
RIM=15.63
IE=13.88, 8"CONC N

STORM CATCH BASIN
RIM=16.64
IE=13.36, 12"CONC SE
IE=13.36, 12"CONC NW

STORM CATCH BASIN
TYPE II
RIM=16.36
IE=13.34,12"CONC NW
IE=13.21, 12"CONC SE
IE=13.39, 15"CONC SW

STORM CATCH BASIN
TYPE II
RIM=16.55
IE=12.57, 12"PVC NW
IE=6.67, 24"CONC NE
IE=7.07, 24"CONC SE
LADDER SW

P.O.T. "104"
FOUND MONUMENT
2"SURFACE BRASS
DISK W/PUNCH
12/08/19

STORM MANHOLE
RIM=17.50
IE=4.97, 30"CONC NW
IE=4.97, 30"CONC SE
IE=6.75, 24"PVC SW
LADDER EAST

SANITARY SEWER
MANHOLE
RIM=17.59
IE=5.34, 18"CONC NW
IE=5.19, 18"CONC SE
IE=5.76, 8"CONC SW
LADDER SE

HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- CW COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
- STORM DRAIN LINE
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- RECORD WATER LINE
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- BURIED POWER LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

KEY MAP
N.T.S.

V01.09 THORNE ROAD · V01.13 · V01.10 · V01.11 · V01.12 · VACATED ASHTON WAY · PORT OF TACOMA ROAD · V01.08 · V01.07 · V01.06 · V01.02 · V01.03 · V01.04 · V01.05 · MAXWELL WAY

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APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

V01.05
5 OF 13

CHECKED BY	DATE		
PROJ. ENGR	DATE	PRINTED BY:	sanderc Sep 12, 2024
SECTION:		PORT ADDRESS:	ONE SITCUM PLAZA
RANGE:			TACOMA, WA 98401-1837
TOWNSHIP:		DRAWING SCALE:	AS NOTED
VERT:	MLLW 19.39' @ Tide 22 1933		
DAT-HRZ:	WA83-SF		
PARCEL:			
CONT/CONS:			
M. ID:			
PHASE:			

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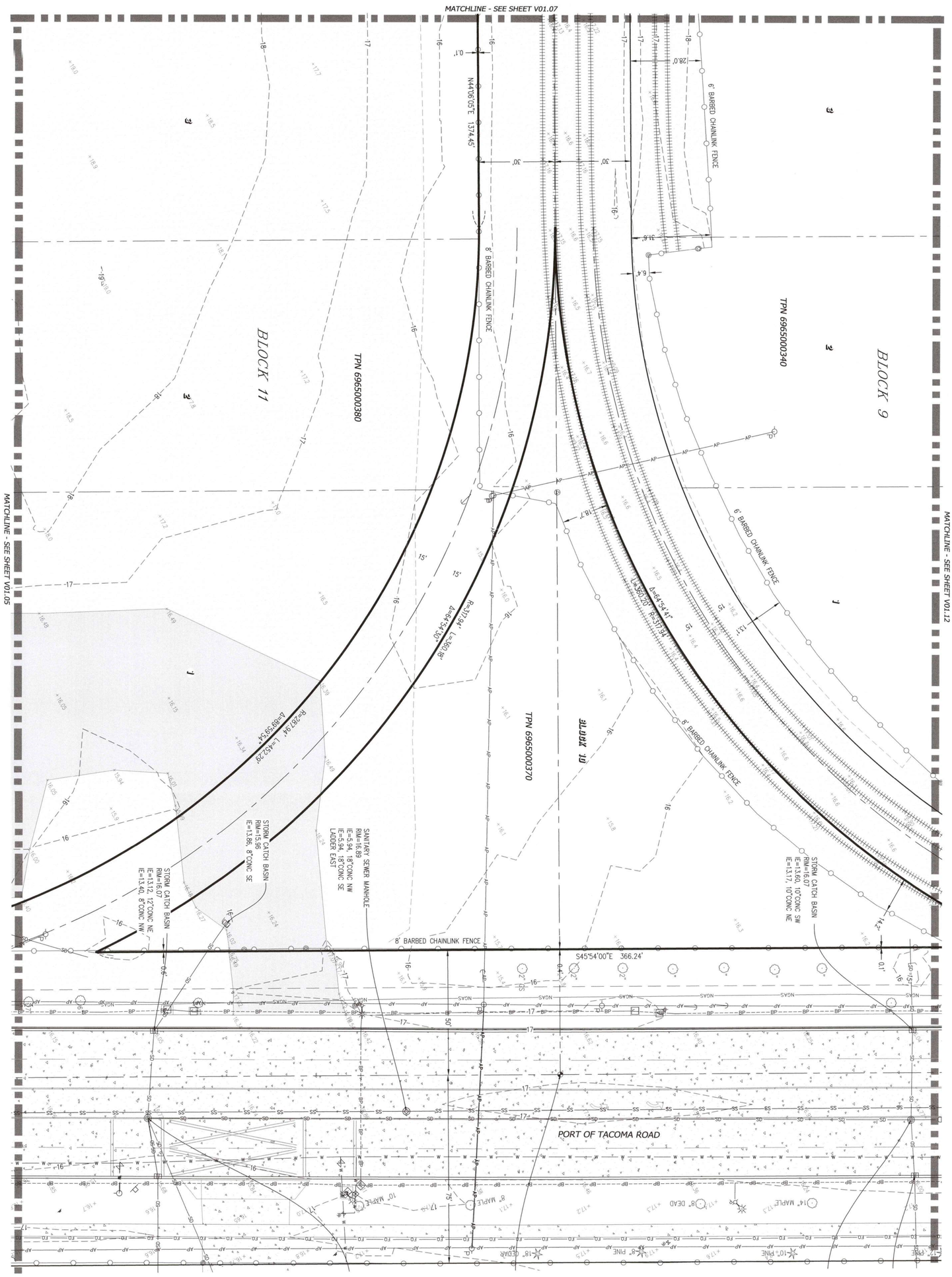

GRAVEL SURFACE
CONCRETE SURFACE
ASPHALT SURFACE
RAILROAD TRACKS
CHAIN LINK FENCE
OVERHEAD POWER LINE
BURIED POWER LINE
BURIED GAS LINE
RECORD WATER LINE
BURIED WATER LINE
SANITARY SEWER LINE
RECORD STORM LINE
STORM DRAIN LINE
SCHED. B EXCEPTION NUMBER
TELECOM RISER
TPN TAX PARCEL NUMBER
MONITORING WELL
WETLAND FLAG
COTTONWOOD TREE
SIGN
BOLLARD
UTILITY CLEANOUT
TRAFFIC SIGNAL BOX
LIGHT POLE
POWER TRANSFORMER
POWER VAULT
JUNCTION BOX
GUY ANCHOR
UTILITY POLE
POWER CABINET
GAS VALVE
IRRIGATION CONTROL VALVE
WATER BLOW OFF
WATER VAULT
FIRE HYDRANT
WATER METER
WATER VALVE
STORM CATCH BASIN
STORM MANHOLE
SANITARY SEWER MANHOLE
SURVEY CONTROL POINT
SET REBAR W/ CONTROL CAP
FOUND MONUMENT AS NOTED
HORIZONTAL SCALE: 1"=20'

V01.06 6 OF 13	**THORNE ROAD OFF-DOCK FACILITY** TOPOGRAPHIC SURVEY	APPROVED:	CHECKED BY DATE
		DIRECTOR ENG. DATE	PROJ. ENGR DATE
CONT/CONS:	TOWNSHIP: RANGE: SECTION:	PRINTED BY: sanderc Sep 12, 2024	
M. ID:	DAT-HRZ: WA83-SF VERT: MLLW 19.39' @ Tide 22 1933	PORT ADDRESS: ONE SITCUM PLAZA	
PHASE:	PARCEL: DRAWING SCALE: AS NOTED	TACOMA, WA 98401-1837	

09-12-24

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BINDING EDGE

MATCHLINE - SEE SHEET V01.11

TPN 69650-0340
"JMK FIBER/LINK PETROLEUM"
COE, ET.AL.

HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/ X STAMPED TPW 38466 UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
- STORM DRAIN LINE
- RECORD STORM LINE
- SANITARY SEWER LINE
- BURIED WATER LINE
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- BURIED POWER LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

KEY MAP
N.T.S.
V01.13 V01.10 V01.11 V01.12 V01.09 V01.08 V01.07 V01.06 V01.02 V01.03 V01.04 V01.05
TACOMA ROAD · VACATED ASHTON WAY · PORT OF TACOMA ROAD · MAXWELL WAY

TPN 6965000350
TPN 6965000340
TPN 6965000390
TPN 6965000380
TPN 6965000400

WETLAND BUFFER PER GRETTE & ASSOCIATES

BLOCK 9
BLOCK 11

6' BARBED CHAINLINK FENCE
8' BARBED CHAINLINK FENCE

N45°53'15"W 435.70'
N44°06'05"E 1374.45'

FOUND 1-1/2" I.D. IRON PIPE 12/06/2019

STORM MANHOLE
RIM=16.22
IE=11.17, 24"CONC SW
IE=12.32, 12"CONC E
IE=12.26, 12"CONC NW
LADDER SE & NW

WETLAND AS DELINEATED BY GRETTE & ASSOCIATES (SEE NOTE 8)

WETLAND BUFFER PER GRETTE & ASSOCIATES

MATCHLINE - SEE SHEET V01.08
MATCHLINE - SEE SHEET V01.06
MATCHLINE - SEE SHEET V01.04

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APPROVED:

DIRECTOR ENG. DATE

PRINTED BY: sanderc Sep 12, 2024

PORT ADDRESS:ONE SITCUM PLAZA

TACOMA, WA 98401-1837

CHECKED BY DATE

PROJ. ENGR DATE

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	

V01.07
7 OF 13

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BINDING EDGE

MATCHLINE - SEE SHEET V01.12

MATCHLINE - SEE SHEET V01.11

MATCHLINE - SEE SHEET V01.09

MATCHLINE: SEE SHEET, V01.07

MATCHLINE - SEE SHEET V01.03

TPN 6965000350

TPN 6965000400

BLOCK 9

BLOCK 11

14 13 12 11 10 9

8' BARBED CHAINLINK FENCE

N44°06'05"E 762.60'

N44°06'05"E 1374.45'

8' BARBED CHAINLINK FENCE

WETLAND BUFFER PER GRETTE & ASSOCIATES

WETLAND AS DELINEATED BY GRETTE & ASSOCIATES (SEE NOTE 8)

STORM MANHOLE
RIM=16.79
IE=9.9, 30"CONC NE
(FULL OF DEBRIS)
IE=9.8, 30"CONC SW
(FULL OF DEBRIS)
IE=11.11, 12"CONC SE
IE=10.83, 12"CONC NW
LADDER SOUTH

STORM MANHOLE
RIM=16.96
IE=10.72, 30"CONC SW
IE=10.84, 24"CONC NE
IE=12.38, 8"CMP SE
IE=12.18, 12"CONC NW
LADDER SOUTH

STORM CATCH BASIN
TYPE II
RIM=15.42
IE=11.80, 12"PVC SE
IE=11.33, 15"CMP SW
LADDER NORTH

STORM CATCH BASIN
RIM=15.50
IE=13.45, 6"PVC NW

FOUND 1-1/2" I.D. IRON PIPE
12/06/2019

N45°53'15"W 435.70'

HORIZONTAL SCALE: 1"=20'
20 0 20 40

KEY MAP
N.T.S.
V01.13 V01.10 V01.11 V01.12 V01.09 V01.08 V01.07 V01.06 V01.02 V01.03 V01.04 V01.05
THORNE ROAD
VACATED ASHTON WAY
PORT OF TACOMA ROAD
MAXWELL WAY

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/ "X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
- GAS VALVE
- POWER CABINET
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- X" CW COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
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1	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR
JEFF SCHILLING
STATE OF WASHINGTON
01-12-24

APPROVED:
DIRECTOR ENG. DATE

CHECKED BY DATE

PRINTED BY: sanderc Sep 12, 2024
PORT ADDRESS:ONE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

TOWNSHIP:		SECTION:	
RANGE:		PORT OF TACOMA	
DAT-HRZ:	WA83-SF	VERT:	MLLW 19.39' @ Tide 22 1933
PARCEL:		DRAWING SCALE:	AS NOTED

V01.08
8 OF 13

CONT/CONS:
M. ID:
PHASE:

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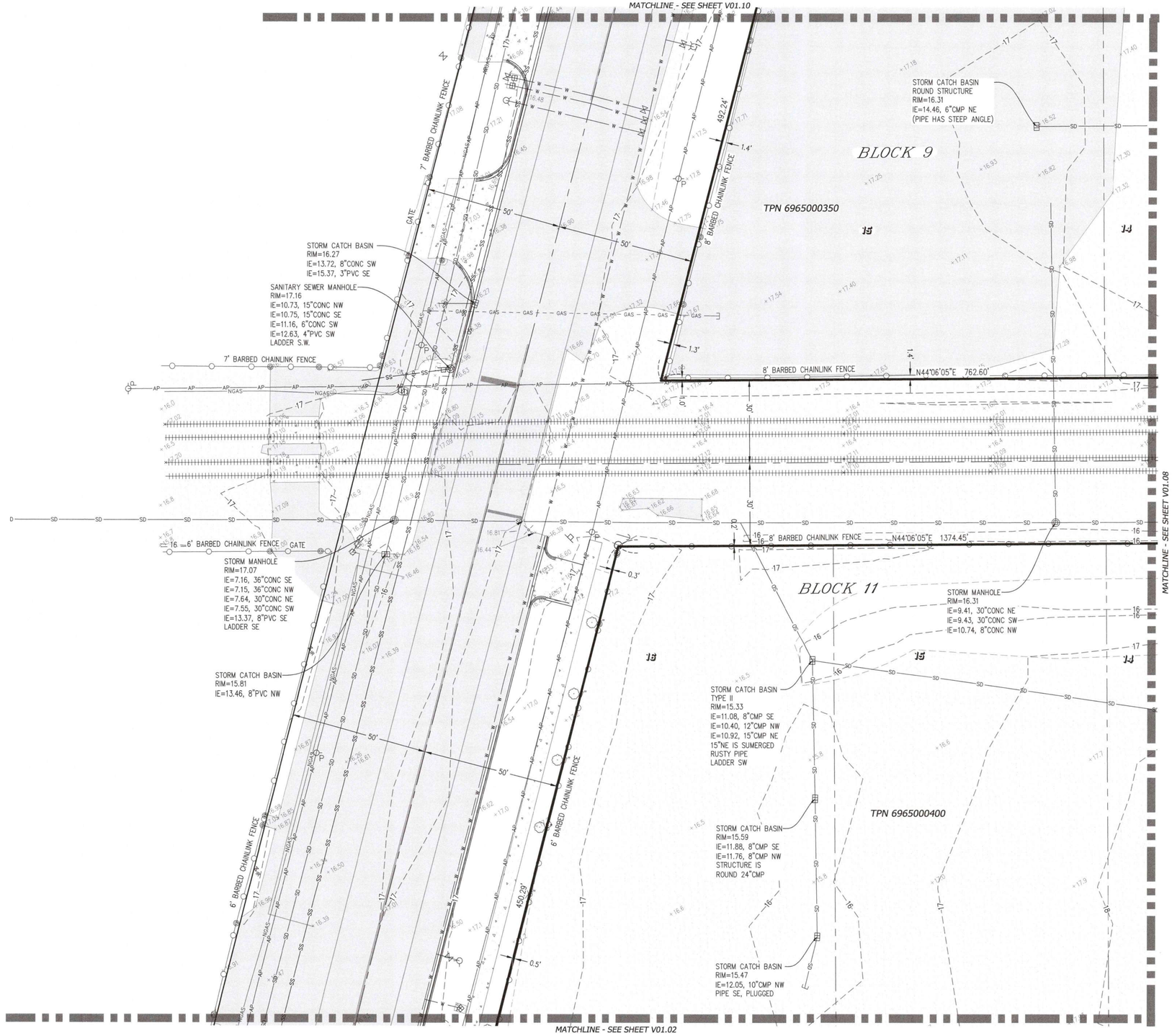
BINDING EDGE



HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
- SET REBAR W/ CONTROL CAP
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- WATER VAULT
- WATER BLOW OFF
- IRRIGATION CONTROL VALVE
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- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
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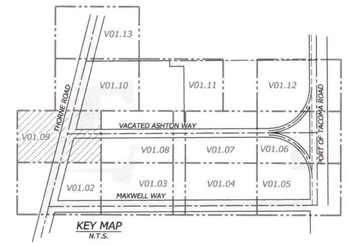
- POWER TRANSFORMER
- LIGHT POLE
- TRAFFIC SIGNAL BOX
- UTILITY CLEANOUT
- BOLLARD
- SIGN
- X" CW COTTONWOOD TREE
- WETLAND FLAG
- MONITORING WELL
- TPN TAX PARCEL NUMBER
- TELECOM RISER
- SCHED. B EXCEPTION NUMBER
- SD STORM DRAIN LINE
- SD-R SD-R RECORD STORM LINE
- SS SS SANITARY SEWER LINE
- W W W BURIED WATER LINE
- W-R W-R RECORD WATER LINE
- NGAS BURIED GAS LINE
- BP BP BURIED POWER LINE
- AP AP OVERHEAD POWER LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE



Port of Tacoma
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1	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR
SCHILLING
STATE OF WASHINGTON
01-12-24

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

PRINTED BY: sanderc Sep 12, 2024
PORT ADDRESS:ONE SITCUM PLAZA
TACOMA, WA 98401-1837

CHECKED BY	DATE		
PROJ. ENGR	DATE		
TOWNSHIP:	RANGE:	SECTION:	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

CONT/CONS:
M. ID:
PHASE:

V01.09
9 OF 13

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PORT OF TACOMA FILE: O:\18600\186541\Drawings\186541 - V01.09

BINDING EDGE

MATCHLINE - SEE SHEET V01.13

N44°06'45"E 536.63'

(AREA NOT SURVEYED)

42.9'

(VACATED ASHTON WAY)

STORM MANHOLE
RIM=16.90
IE=6.27, N CHANNEL 48"CONC
IE=6.18, CTR. CHANNEL 48"CONC
IE=10.3, BOTT. CONC SHELF
IE=11.72, 12"CONC SE
IE=11.40, 15"PVC SW
LADDER NORTH

STORM CATCH BASIN
RIM=16.30
IE=12.40, 12"CONC SE
IE=12.15, 12"CONC NW

FOUND MONUMENT
IN CASE
2"BRASS DISK
W/"X"
DOWN 0.6'±
12/27/19

STORM CATCH BASIN
RIM=16.52
IE=13.95, 12"CONC SW
IE=15.29, 8"CONC NE

8' BARBED CHAINLINK FENCE

18-24-2X32" CW

WETLAND
AS DELINEATED BY
GRETTE & ASSOCIATES
(SEE NOTE 8)

WETLAND BUFFER
PER GRETTE
& ASSOCIATES

7' CHAINLINK FENCE

THORNE ROAD

8' BARBED CHAINLINK FENCE

492.24'

RY SEWER MANHOLE
.54
9, 6"CONC NW
9, 6"CONC SE
4, 15"CONC SW
NW

STORM MANHOLE
RIM=17.06
IE=7.25, N CHANNEL 36"CONC
IE=7.17, CTR. CHANNEL 36"CONC
IE=10.13, BOTT. CONC SHELF
UNABLE TO MEASURE
12" CONC NE
LADDER SE

STORM CATCH BASIN
RIM=16.20
IE=12.46, 12"CONC NE
IE=12.55, 12"CONC SW

STORM CATCH BASIN
RIM=16.36
IE=13.78, 12"CONC NW

STORM CATCH BASIN
ROUND STRUCTURE
RIM=16.40
IE=14.32 6"CMP NE
(PIPE HAS STEEP ANGLE)

STORM CATCH BASIN
ROUND STRUCTURE
RIM=16.31
IE=14.38 6"CMP NE
(PIPE HAS STEEP ANGLE)

TPN 6965000350

BLOCK 9

7' BARBED CHAINLINK FENCE

MATCHLINE - SEE SHEET V01.09

MATCHLINE - SEE SHEET V01.08

MATCHLINE - SEE SHEET V01.11

HORIZONTAL SCALE: 1"=20'
20 0 20 40

LEGEND

- FOUND MONUMENT, 2" BRASS DISK W/"X" STAMPED "TPW 38486" UNLESS OTHERWISE NOTED
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- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

KEY MAP
N.T.S.

Port of Tacoma
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1	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR — SCHILLING — 01-12-24

CHECKED BY	DATE

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	

APPROVED:	PROJ. ENGR	DATE
DIRECTOR ENG.	PRINTED BY: sanderc Sep 12, 2024	
	PORT ADDRESS: ONE SITCUM PLAZA	
	TACOMA, WA 98401-1837	

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

V01.10

10 OF 13

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PORT OF TACOMA FILE: O:\18600\18654\Drawings\18654 - V01.10

BINDING EDGE

N44°06'45"E 536.63'

(AREA NOT SURVEYED)

(VACATED ASHTON WAY)

41.4'

S45°53'15"E 40.00'

N44°06'45"E 100.01'

3.2'

2.1'

8' BARBED CHAINLINK FENCE

WETLAND BUFFER PER GRETTE & ASSOCIATES

WETLAND AS DELINEATED BY GRETTE & ASSOCIATES (SEE NOTE 8)

WETLAND AS DELINEATED BY GRETTE & ASSOCIATES (SEE NOTE 8)

TPN 6965000340

TPN 6965000350

BLOCK 9

WETLAND BUFFER PER GRETTE & ASSOCIATES

2X6" MADRONA

2X7" MADRONA

8" MADRONA

6" ALDER

8" ALDER

11" ALDER

MATCHLINE - SEE SHEET V01.10

MATCHLINE - SEE SHEET V01.08

MATCHLINE - SEE SHEET V01.07

HORIZONTAL SCALE: 1"=20'

20 0 20 40

LEGEND

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KEY MAP
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REGISTERED PROFESSIONAL LAND SURVEYOR — SCHILLING — WASHINGTON — 09-12-24

APPROVED:

DIRECTOR ENG. DATE

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
P. ID:	PARCEL:	DRAWING SCALE: AS NOTED	

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CHECKED BY DATE

PROJ. ENGR DATE

V01.11
11 OF 13

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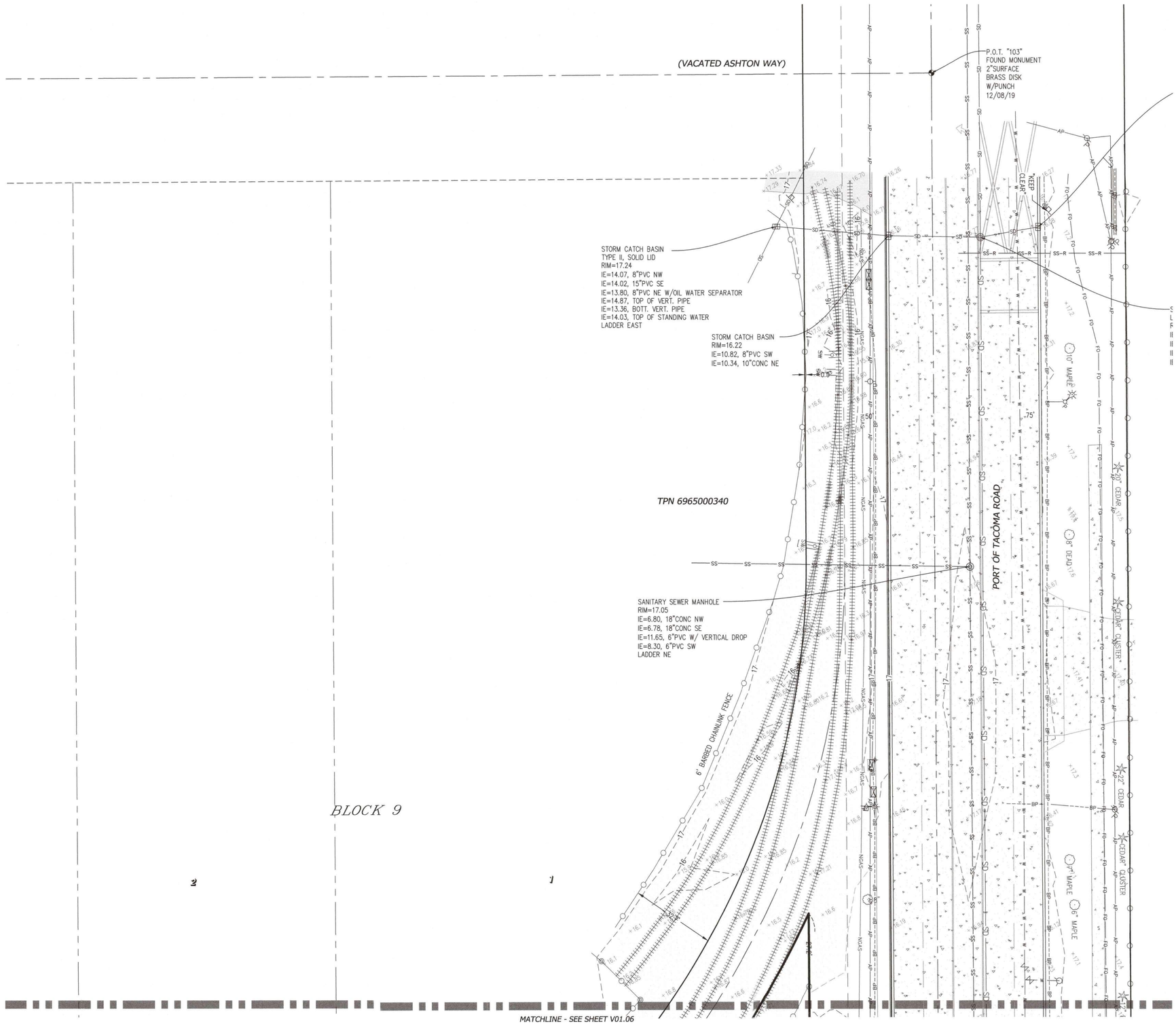

HORIZONTAL SCALE: 1"=20'

20 0 20 40

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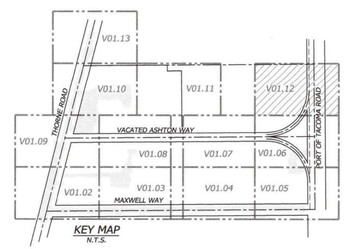

KEY MAP
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REGISTERED PROFESSIONAL LAND SURVEYOR — SCHILLING — WASHINGTON — 01.12.24

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	

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PROJ. ENGR DATE Sep 12, 2024

APPROVED:

DIRECTOR ENG. DATE 9-12-24

PRINTED BY: sanderc

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

V01.12

12 OF 13

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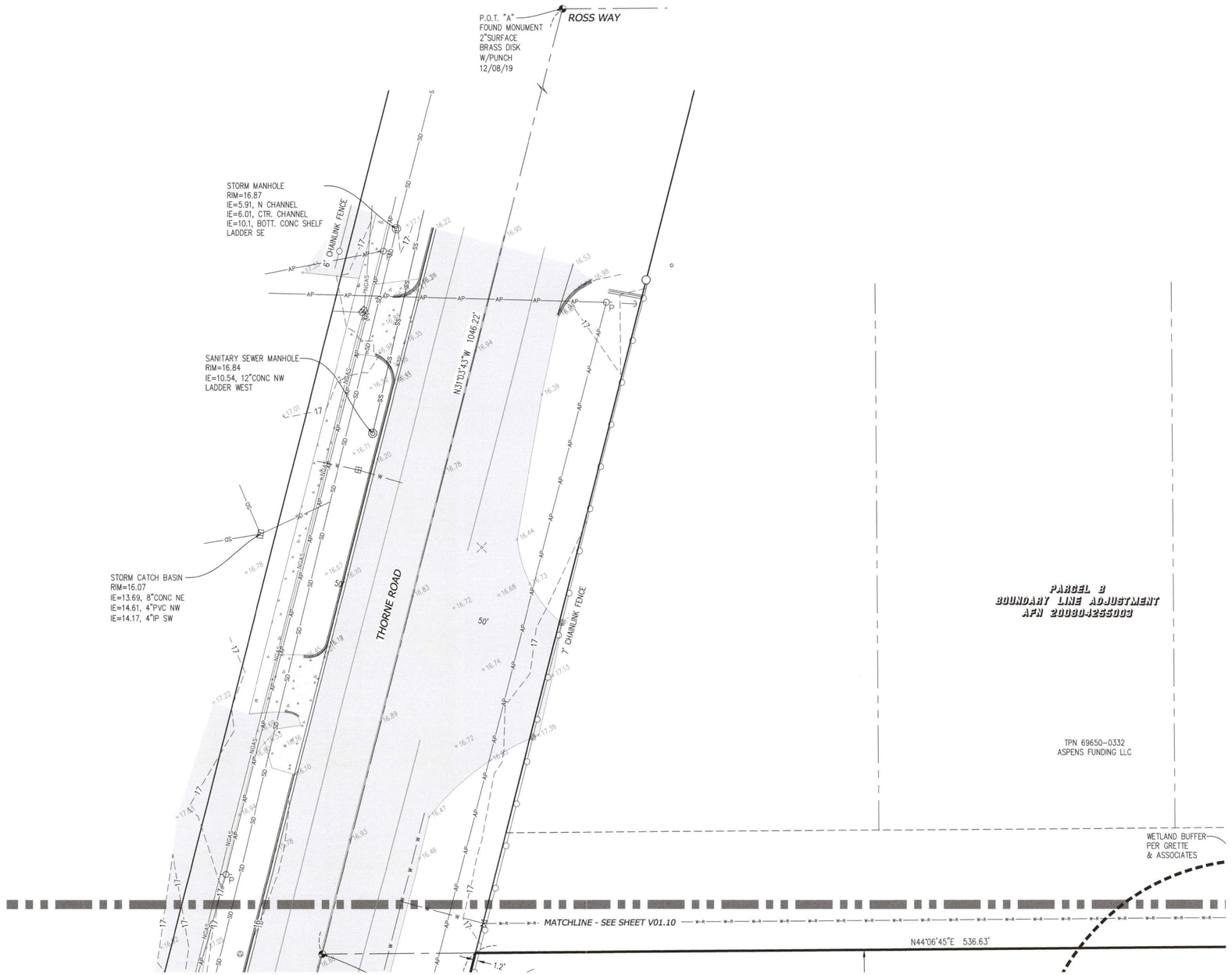

HORIZONTAL SCALE: 1"=20'

20 0 20 40

LEGEND

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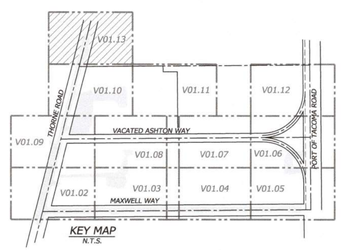

KEY MAP
N.T.S.

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1	DATUM STATEMENTS			09/12/2024

REGISTERED PROFESSIONAL LAND SURVEYOR — SCHILLING — 38486 — STATE OF WASHINGTON
09-12-24

APPROVED:
Director Engineering 9/23/25

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	PORT ADDRESS:ONE SITCUM PLAZA
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	TACOMA, WA 98401-1837

CHECKED BY DATE
PROJ. ENGR DATE Sep 12, 2024

PRINTED BY: sanderc

THORNE ROAD OFF-DOCK FACILITY

TOPOGRAPHIC SURVEY

V01.13

13 OF 13

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BINDING EDGE

AREA 3 - SHEET C1.03

ASHTON WAY (VACATED)

SEE SEPARATE WO PLANS WO23-0096 AND FOR ALL WORK OUTSIDE PORT PROPERTY LIMITS

WORK WITHIN TACOMA RAIL RIGHT OF WAY IS REVIEWED BY TACOMA RAIL THIS WORK IS NOT REVIEWED AS PART OF SITE DEVELOPMENT SDEV 23-0193 AND IS NOT REVIEWED AS PART OF WO23-0096

PARCEL 85

THORNE RD

PROPERTY LINE AND FENCE (TYP)

AREA 1 - SHEET C1.01

AREA 2 - SHEET C1.02

PARCEL 87

PARCEL 72

PORT OF TACOMA RD

MAXWELL WAY

DEMOLITION - OVERALL PLAN

SCALE: 1" = 80'

SITE DEVELOPMENT

THE LIMITS OF PROPOSED IMPROVEMENT APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (WO23-0096) FOR APPROVED RIGHT-OF-WAY IMPROVEMENTS.

PROJECT NORTH

TRUE NORTH

80' 0' 80' 160'

SCALE: 1"=80'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:
DIRECTOR ENG. DATE

		EK 4/3/2025	
		CHECKED BY	DATE
		JT 4/2/2025	
PRINTED BY:	jtodd Apr 03, 2025	PROJ. ENGR	DATE
PORT ADDRESS:			

THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	DRAWING SCALE: AS NOTED
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87			

6688
C1.00
19 OF 105

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

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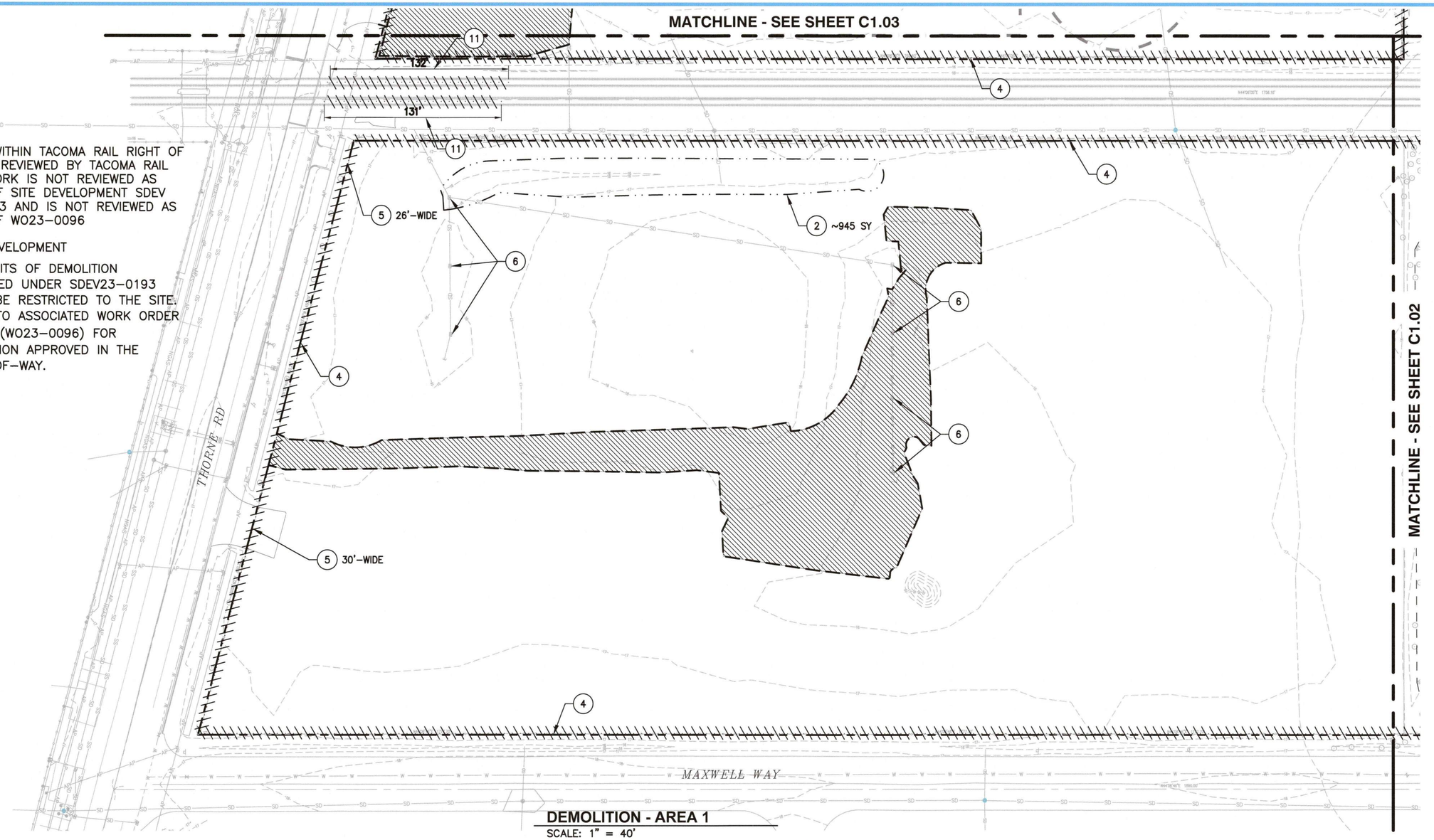


WORK WITHIN TACOMA RAIL RIGHT OF WAY IS REVIEWED BY TACOMA RAIL THIS WORK IS NOT REVIEWED AS PART OF SITE DEVELOPMENT SDEV 23-0193 AND IS NOT REVIEWED AS PART OF WO23-0096

SITE DEVELOPMENT

THE LIMITS OF DEMOLITION APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (WO23-0096) FOR DEMOLITION APPROVED IN THE RIGHT-OF-WAY.

DEMOLITION - AREA 1
SCALE: 1" = 40'

DEMOLITION NOTES:

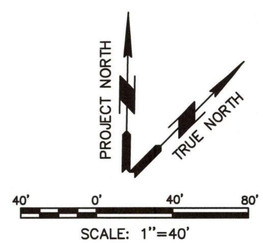
1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
3. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

DEMOLITION KEY NOTES:

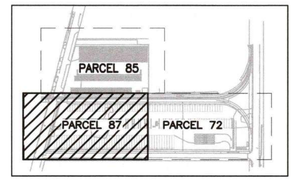
(1) CLEAR TREES AND VEGETATION; TREE ROOTS 1' BEYOND THE TRUNK MAY REMAIN
(2) CLEAR AND GRUB VEGETATION
(3) REMOVE 6" TOPSOIL
(4) REMOVE CHAIN LINK FENCE, GATES AND POSTS
(5) REMOVE DOUBLE-LEAF SWING GATE AND ASSOCIATED GATE STOPS
(6) REMOVE EXISTING CATCH BASIN; PLUG EXISTING PIPE
(11) REMOVE RAILS, TIES AND BALLAST TO NEAREST BOLTED JOINT SAWCUT RAIL AT EDGE OF EXISTING ROADWAY CROSSING

LEGEND:

- SAWCUT AND REMOVE FULL DEPTH ACP
- PROPERTY LINE
- DEMOLISH
- POSSIBLE SOIL CONTAMINATION AREA



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
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600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-2222
moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

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JT 4/2/2025
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jtodd Apr 03, 2025

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C1.01
20 OF 105

THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION - AREA 1

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

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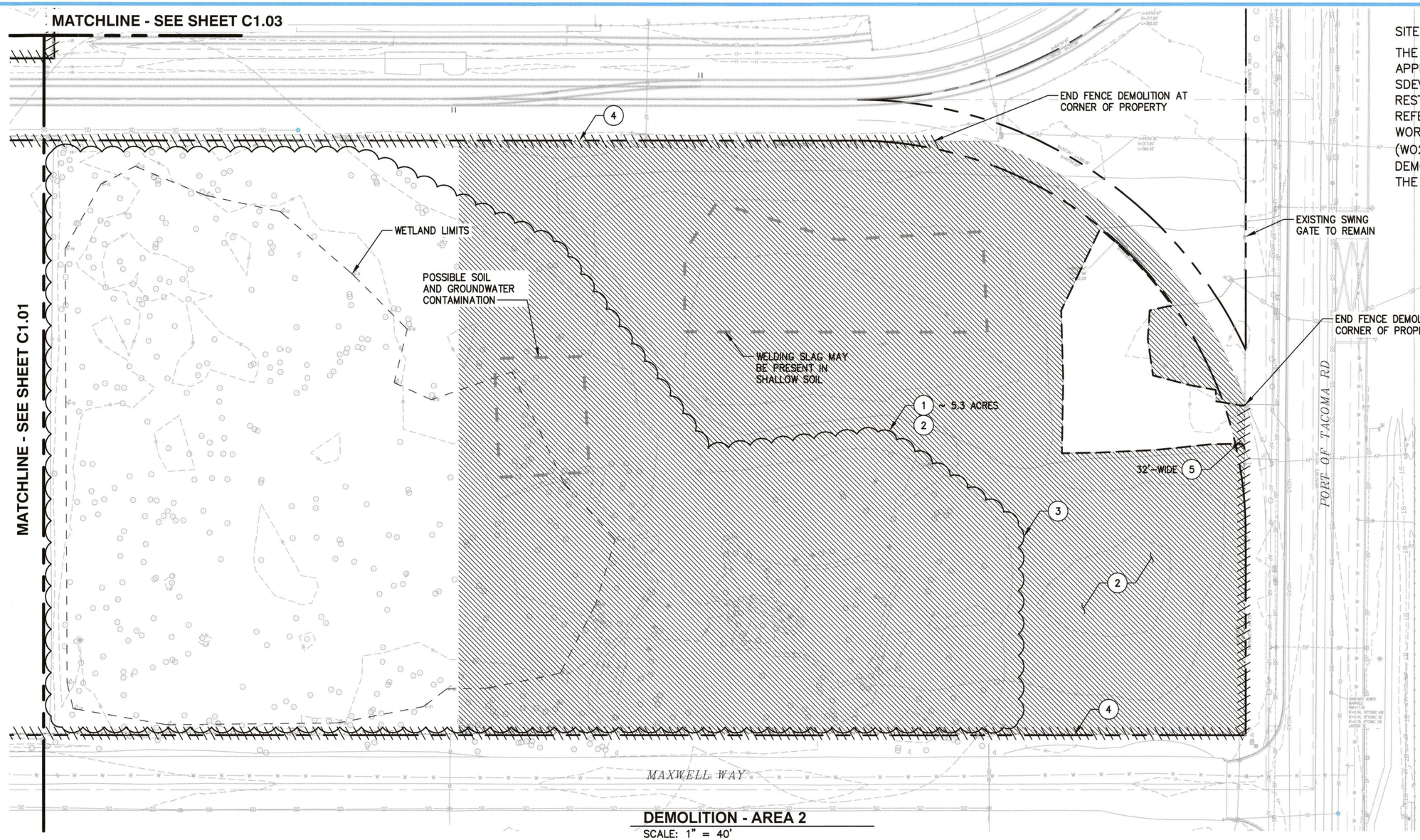
PORT OF TACOMA FILE: Q:\SEA\10284-02\CADD_Active_SheetSet\10284002-C01.01

BINDING EDGE



DEMOLITION - AREA 2

SCALE: 1" = 40'

SITE DEVELOPMENT

THE LIMITS OF DEMOLITION APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (W023-0096) FOR DEMOLITION APPROVED IN THE RIGHT-OF-WAY.

DEMOLITION NOTES:

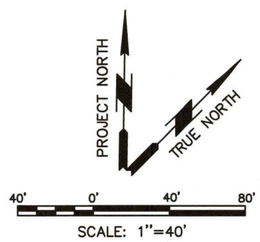
1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
3. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

DEMOLITION KEY NOTES:

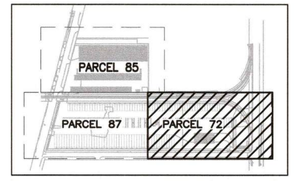
1. CLEAR TREES AND VEGETATION; TREE ROOTS 1' BEYOND THE TRUNK MAY REMAIN
2. CLEAR AND GRUB VEGETATION
3. REMOVE 6" TOPSOIL
4. REMOVE CHAIN LINK FENCE, GATES AND POSTS
5. REMOVE DOUBLE-LEAF SWING GATE AND ASSOCIATED GATE STOPS

LEGEND:

- SAWCUT AND REMOVE FULL DEPTH ACP
- PROPERTY LINE
- DEMOLISH
- POSSIBLE SOIL CONTAMINATION AREA



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206)622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
jtodd Apr 03, 2025

APPROVED:
DIRECTOR ENG. DATE
PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:
DRAWING SCALE: AS NOTED

THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION - AREA 2

6688
C1.02
21 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87
		SECTION:	34

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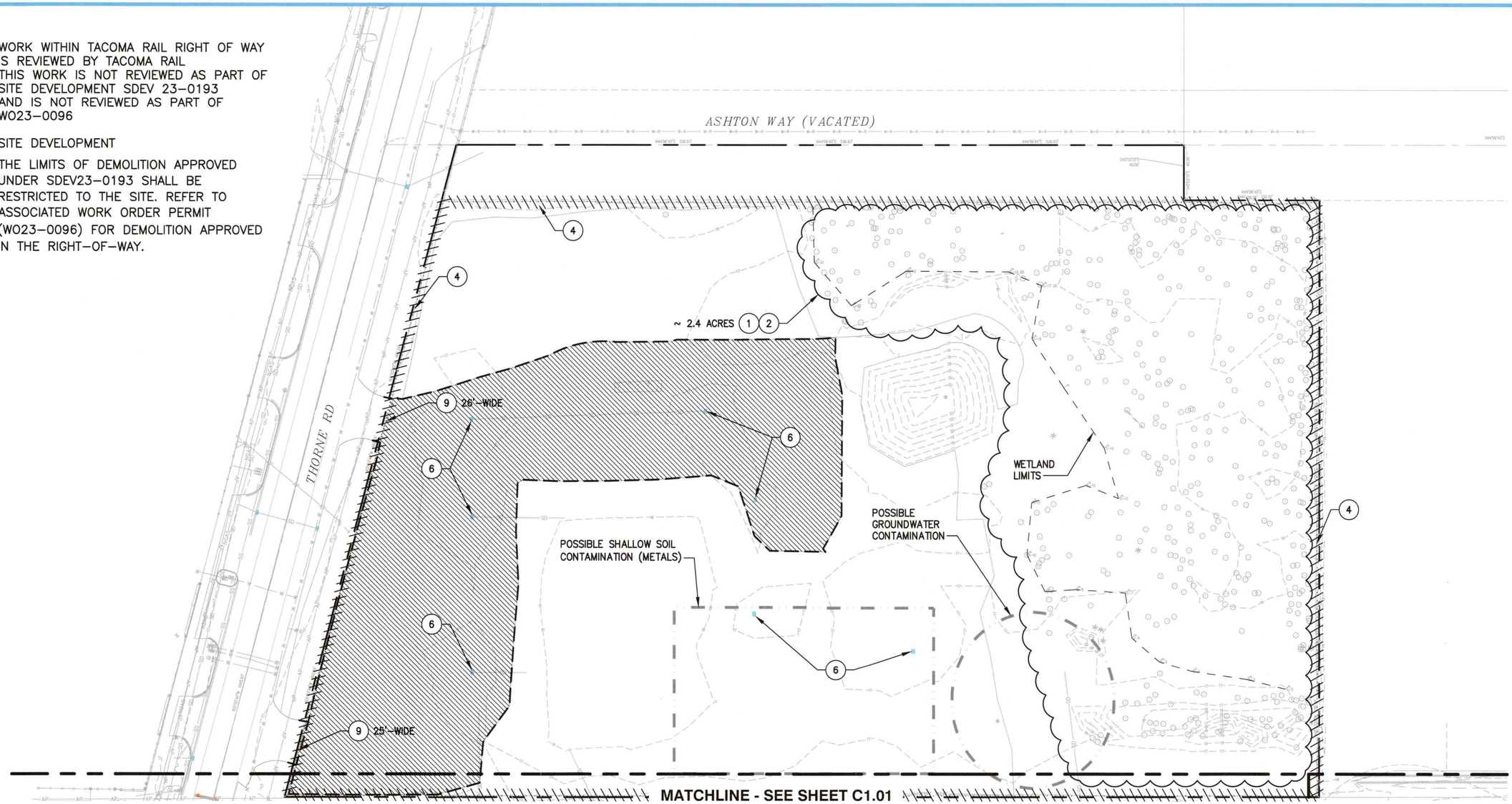
BINDING EDGE

WORK WITHIN TACOMA RAIL RIGHT OF WAY IS REVIEWED BY TACOMA RAIL
THIS WORK IS NOT REVIEWED AS PART OF SITE DEVELOPMENT SDEV 23-0193
AND IS NOT REVIEWED AS PART OF WO23-0096

SITE DEVELOPMENT

THE LIMITS OF DEMOLITION APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (WO23-0096) FOR DEMOLITION APPROVED IN THE RIGHT-OF-WAY.



DEMOLITION - AREA 3
SCALE: 1" = 40'

DEMOLITION NOTES:

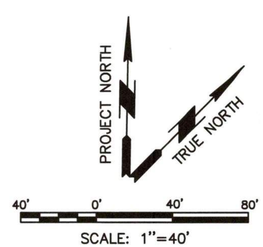
1. SEE ELECTRICAL PLANS FOR ELECTRICAL AND COMMUNICATION DEMOLITION REQUIREMENTS.
2. ALL UTILITIES, STRUCTURES, AND SITE FEATURES NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED IN PLACE.
3. SAWCUT AREAS SHOWN DO NOT INCLUDE ALL SAWCUTTING REQUIRED FOR UTILITY WORK. REFER TO THE ELECTRICAL PLANS FOR EXTENT OF BURIED UTILITY WORK. EXTENTS WILL VARY WITH CONTRACTOR MEANS AND METHODS.

DEMOLITION KEY NOTES:

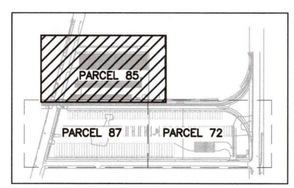
(1) CLEAR TREES AND VEGETATION; TREE ROOTS 1' BEYOND THE TRUNK MAY REMAIN
(2) CLEAR AND GRUB VEGETATION
(3) REMOVE 6" TOPSOIL
(4) REMOVE CHAIN LINK FENCE, GATES AND POSTS
(6) REMOVE EXISTING CATCH BASIN; PLUG EXISTING PIPE
(9) REMOVE SLIDING GATE

LEGEND:

SAWCUT AND REMOVE FULL DEPTH ACP
PROPERTY LINE
DEMOLISH
POSSIBLE SOIL CONTAMINATION AREA



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET
SUITE# 610
SEATTLE, WA 98101
(206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
Todd Apr 03, 2025

APPROVED:
DIRECTOR ENG. DATE

PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION - AREA 3

6688
C1.03
22 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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BINDING EDGE

SITE DEVELOPMENT

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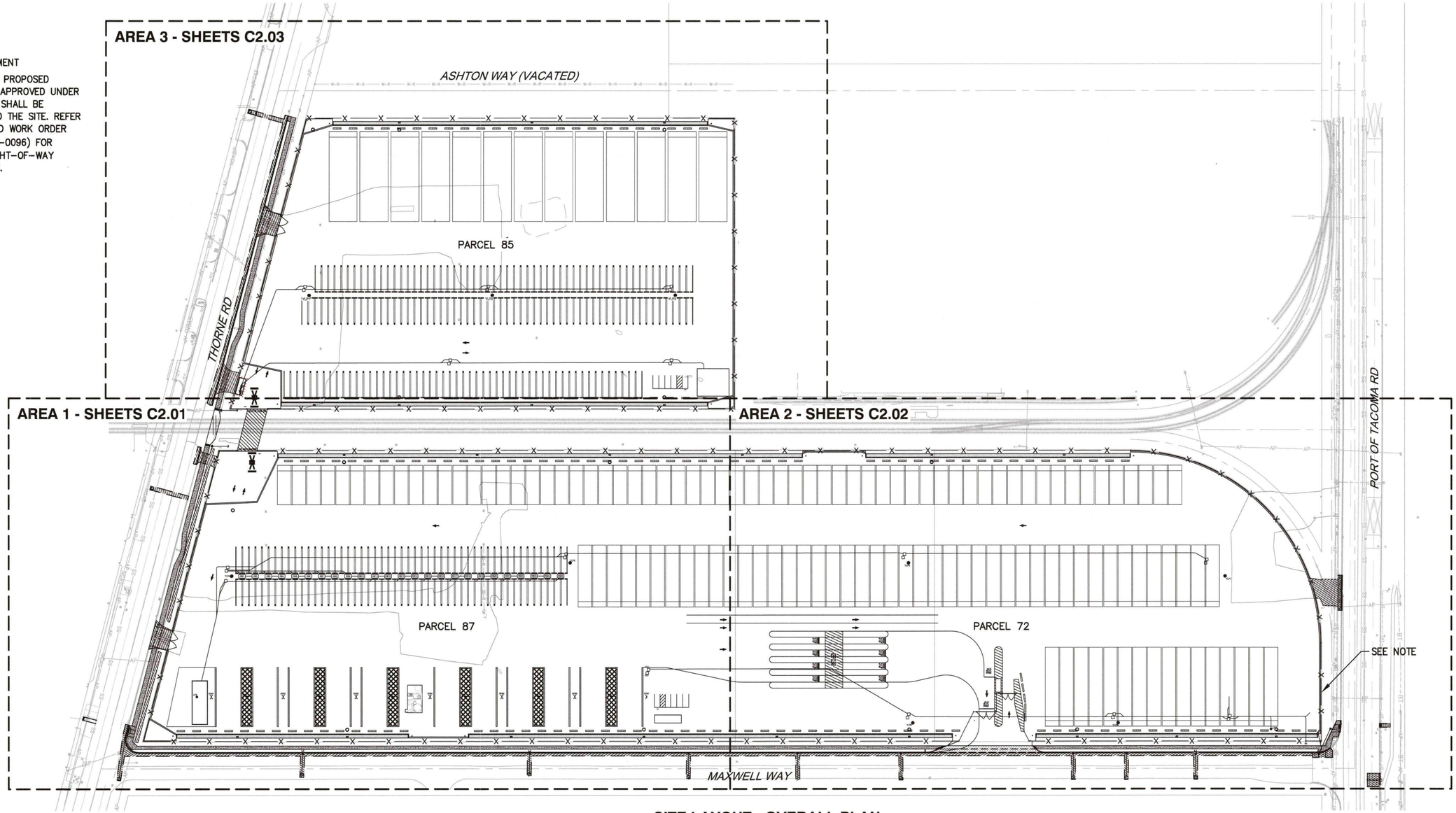
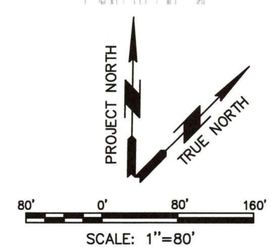


SITE LAYOUT - OVERALL PLAN

SCALE: 1" = 80'

NOTE:

CONTRACTOR SHALL MAINTAIN EXISTING PROJECT SIGN THROUGHOUT CONSTRUCTION. DURING FENCE DEMOLITION, THE SIGN SHALL BE TEMPORARILY SUPPORTED AND RETURNED TO NEW FENCE.



SCALE: 1"=80'

ISSUED FOR CONSTRUCTION
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600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

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APPROVED:

DIRECTOR ENG. DATE

	CHECKED BY	DATE
EK	JT	4/2/2025

PRINTED BY: jtodd Apr 03, 2025

PROJ. ENGR DATE

PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE LAYOUT

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	DRAWING SCALE: AS NOTED
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

6688

C2.00

23 OF 105

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BINDING EDGE

BUILDING NOTES

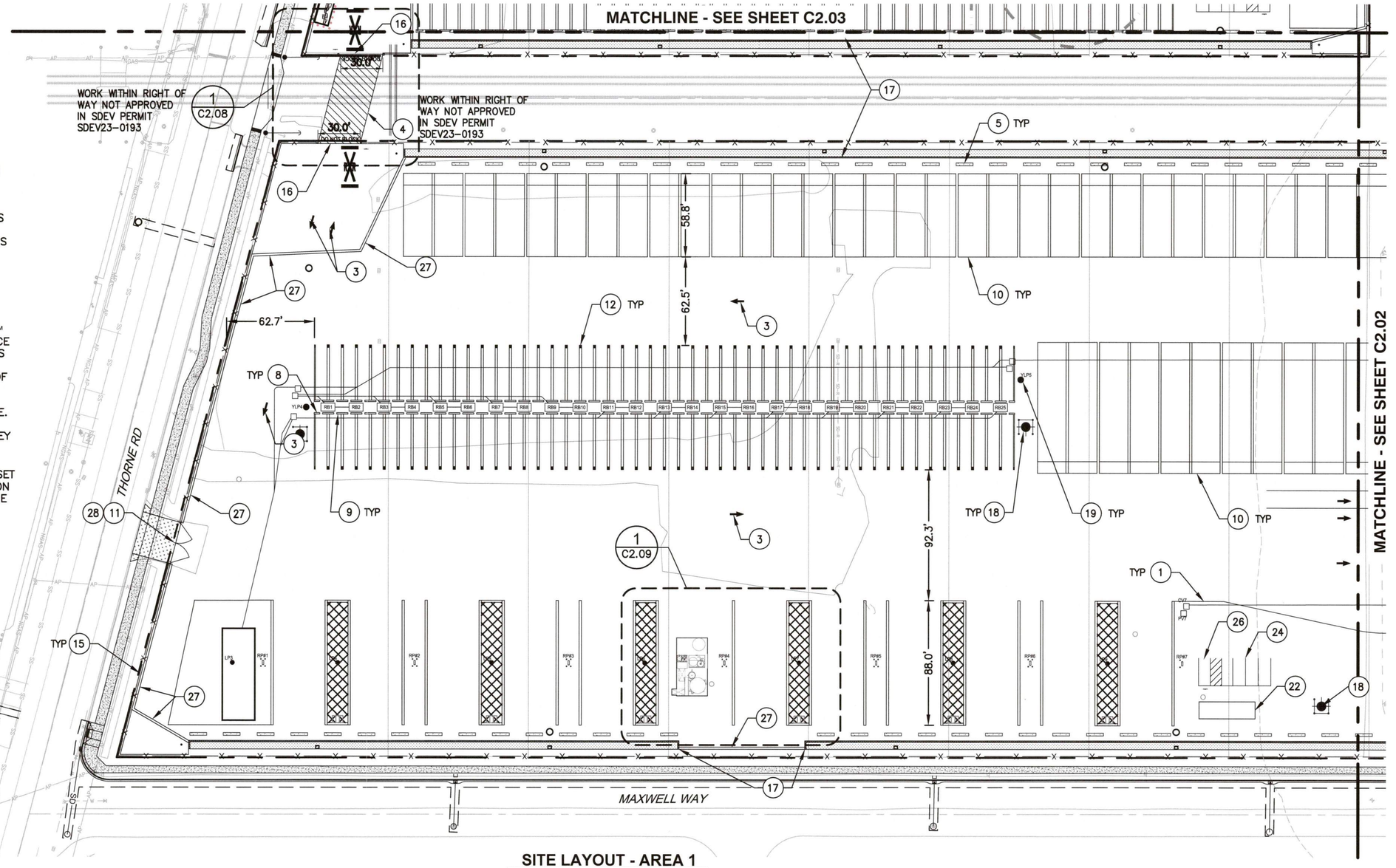
1. TRAILER OFFICE NOT IN CONTRACT. TENANT WILL BE REQUIRED TO COMPLETE BUILDING PERMIT BEFORE INSTALLING TRAILER.
2. HANDICAP SPOT AND CIRCULATION IS ACCESSIBLE IN ALL DIRECTIONS. OVERALL SITE SLOPE IS 1.5% WITHIN THE FACILITY. ACCESSIBLE ROUTE TO TRAILER WILL BE MARKED WHEN TRAILER IS PROCURED AND DOORWAYS ARE LOCATED.
3. PROPOSED RAILWAY CROSSING IS TO BE COORDINATED AND APPROVED BY TACOMA RAIL. THIS APPROVAL IS SEPARATE FROM THE SITE DEVELOPMENT PERMIT REVIEW

KEY BOX NOTES:

PROVIDE A KNOX™ BOX OR KNOX™ VAULT OUTSIDE THE MAIN ENTRANCE GATE AND BOTH EMERGENCY GATES WITH ALL KEYS TO ACCESS THE BUILDINGS AND GATES. THE TOP OF THE BOX SHALL BE MOUNTED BETWEEN 66-INCHES AND 72-INCHES ABOVE FINISHED GRADE. THE LOCK SPECIFICATION IS A ONE-INCH CYLINDER CAM LOCK KEY #39504. PRIOR TO INSTALLATION, CONTACT THE FIRE PREVENTION BUREAU AT (253) 591-5740 TO SET UP A PRE-INSTALLATION INSPECTION TO APPROVE THE LOCATION OF THE BOX

SITE DEVELOPMENT

THE LIMITS OF PROPOSED IMPROVEMENT APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (WO23-0096) FOR APPROVED RIGHT-OF-WAY IMPROVEMENTS.



SITE LAYOUT - AREA 1

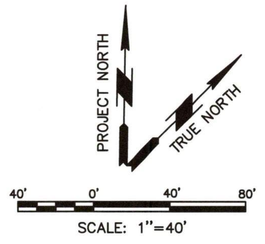
SCALE: 1" = 40'

KEY NOTES:

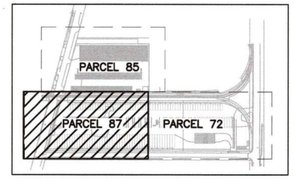
1. 4" WIDE WHITE STRIPE
2. STOP BAR AND SYMBOL, SEE SHEET C2.12, DETAIL 1
3. CHANNELIZATION ARROW, SEE SHEET C2.12, DETAIL 2
4. RAILROAD CROSSING, SEE SHEET C2.08
5. TYPE II CONC TRAFFIC BARRIER, SEE SHEET C2.13, DETAIL 1
6. 8" DIA BOLLARD, SEE SHEET C2.13, DETAIL 2
7. 12" DIA BOLLARD, SEE SHEET C2.13, DETAIL 3
8. 4' TRUCK WHEEL STOP, SEE SHEET C2.13, DETAIL 4
9. 8' TRUCK WHEEL STOP, SEE SHEET C2.13 DETAIL 5
10. EMPTY CONTAINER STRIPING – SEE SHEET C2.14, DETAIL 1
11. EMERGENCY 30FT SWING GATE INCLUDING KNOX BOX, SEE SHEET C2.16, DETAIL 4
12. 40' WHEEL REEFER VALET STRIPING, SEE SHEET C2.15, DETAIL 1
13. CHASSIS STALL STRIPING, SEE SHEET C2.15, DETAIL 2
14. CHASSIS STORAGE STRIPING, SEE SHEET C2.16
15. SECURITY FENCING, SEE SHEET C2.16
16. SLIDING GATE, SEE SHEET C2.16
17. BMT, SEE C5 SERIES SHEETS
18. FIRE HYDRANT, SEE SHEET C4.05
19. 80' LIGHT POLE, SEE SHEET S1.01, DETAIL 1
20. RAIL LIGHT POLE, SEE SHEET S1.01, DETAIL 2
21. 8'x20' GUARD SHELTER
22. 12'x40' MOBILE OFFICE TRAILER (NIC, SEE BUILDING NOTE ABOVE)
23. 48'x40' QUONSET HUT
24. POV PARKING STALL
26. ACCESSIBLE VAN PARKING STALL. FUTURE ACCESSIBLE ROUTE WHEN BUILDING PROCURED. SEE DETAIL 2 SHEET C2.09
27. ASPHALT CONTAINMENT BERM, SEE SHEET C2.09, DETAIL 2
28. "EMERGENCY ACCESS ONLY" SIGN, 2'X4' WITH 8" LETTERING

LEGEND:

PROPERTY LINE



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025 CHECKED BY DATE
JT 4/2/2025 PROJ. ENGR DATE
Todd Apr 03, 2025 DIRECTOR ENG. DATE

APPROVED:

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE LAYOUT - AREA 1

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	PRINTED BY: jtodd
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	PORT ADDRESS:

6688
C2.01
24 OF 105

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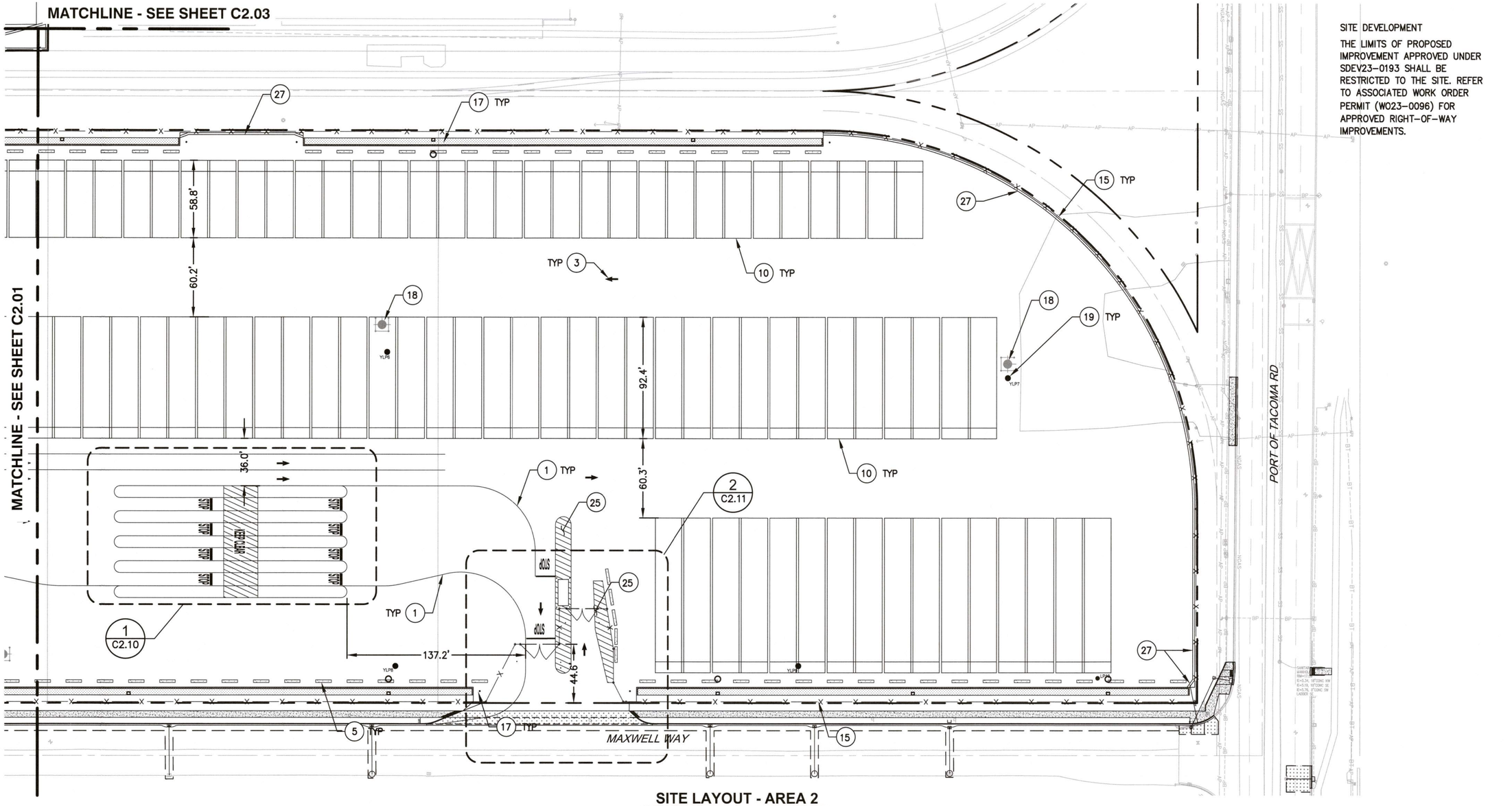
BINDING EDGE



SITE LAYOUT - AREA 2

SCALE: 1" = 40'

SITE DEVELOPMENT

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KEY NOTES:

1. 4" WIDE WHITE STRIPE
2. STOP BAR AND SYMBOL, SEE SHEET C2.12, DETAIL 1
3. CHANNELIZATION ARROW, SEE SHEET C2.12, DETAIL 2
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7. 12" DIA BOLLARD, SEE SHEET C2.13, DETAIL 3
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9. 8' TRUCK WHEEL STOP, SEE SHEET C2.13 DETAIL 5
10. CONTAINER STRIPING – SEE SHEET C2.14, DETAIL 1
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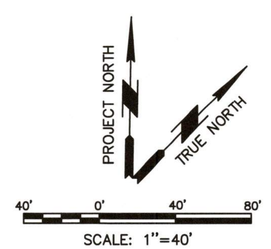
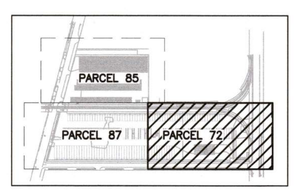
13. CHASSIS STALL STRIPING, SEE SHEET C2.15, DETAIL 2
14. CHASSIS STORAGE STRIPING, SEE SHEET C2.15, DETAIL 3
15. SECURITY FENCING, SEE SHEET C2.16
16. SLIDING GATE, SEE SHEET C2.16
17. BMT, SEE SHEET C5 SERIES SHEETS
18. FIRE HYDRANT, SEE SHEET, SEE SHEET C4.05
19. 80' LIGHT POLE, SEE SHEET S1.01, DETAIL 1
20. RAIL LIGHT POLE, SEE SHEET S1.01, DETAIL 2
21. 8'x20' GUARD SHELTER
22. 12'x40' MOBILE OFFICE TRAILER (NIC)
23. 48'x40' QUONSET HUT
24. POV PARKING STALL
25. 45 DEGREE STRIPING
25. ACCESSIBLE VAN PARKING STALL. PAVEMENT SLOPE < 1.5% FUTURE ACCESSIBLE ROUTE WHEN BUILDING PROCURED
27. ASPHALT CONTAINMENT BERM, SEE SHEET C2.09, DETAIL 2

LEGEND:

PROPERTY LINE



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-2222

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PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:
DRAWING SCALE: AS NOTED

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE LAYOUT - AREA 2

6688
C2.02
25 OF 105

CONT./CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87
		SECTION:	34

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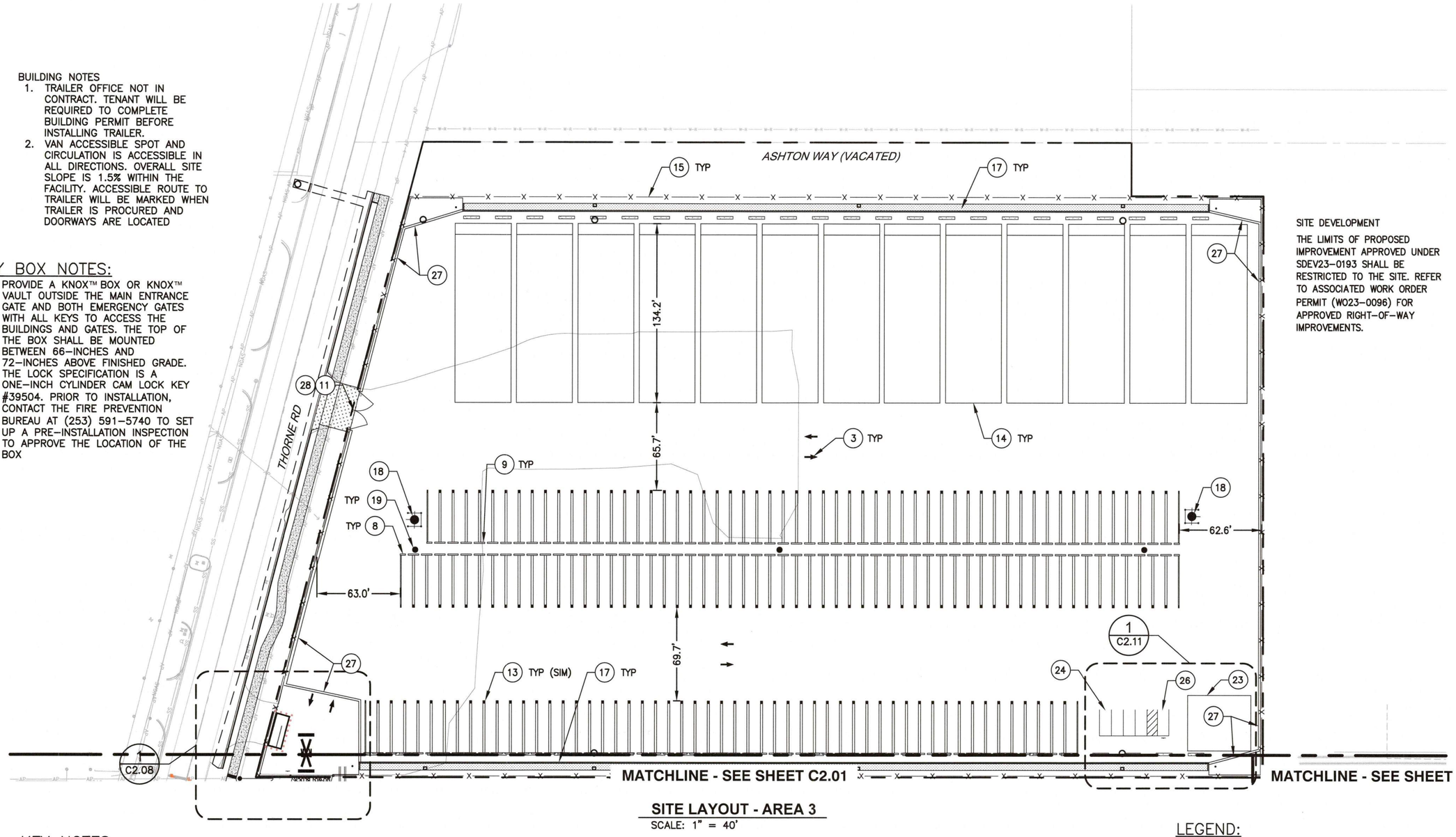
BINDING EDGE

BUILDING NOTES
1. TRAILER OFFICE NOT IN CONTRACT. TENANT WILL BE REQUIRED TO COMPLETE BUILDING PERMIT BEFORE INSTALLING TRAILER.
2. VAN ACCESSIBLE SPOT AND CIRCULATION IS ACCESSIBLE IN ALL DIRECTIONS. OVERALL SITE SLOPE IS 1.5% WITHIN THE FACILITY. ACCESSIBLE ROUTE TO TRAILER WILL BE MARKED WHEN TRAILER IS PROCURED AND DOORWAYS ARE LOCATED

KEY BOX NOTES:

PROVIDE A KNOX™ BOX OR KNOX™ VAULT OUTSIDE THE MAIN ENTRANCE GATE AND BOTH EMERGENCY GATES WITH ALL KEYS TO ACCESS THE BUILDINGS AND GATES. THE TOP OF THE BOX SHALL BE MOUNTED BETWEEN 66-INCHES AND 72-INCHES ABOVE FINISHED GRADE. THE LOCK SPECIFICATION IS A ONE-INCH CYLINDER CAM LOCK KEY #39504. PRIOR TO INSTALLATION, CONTACT THE FIRE PREVENTION BUREAU AT (253) 591-5740 TO SET UP A PRE-INSTALLATION INSPECTION TO APPROVE THE LOCATION OF THE BOX



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SITE LAYOUT - AREA 3
SCALE: 1" = 40'

KEY NOTES:

1. 4" WIDE WHITE STRIPE
2. STOP BAR AND SYMBOL, SEE SHEET C2.12, DETAIL 1
3. CHANNELIZATION ARROW, SEE SHEET C2.12, DETAIL 2
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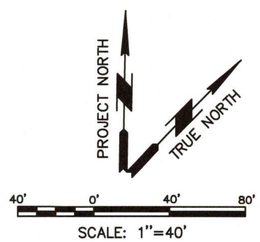
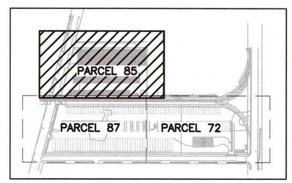
16. SLIDING GATE, SEE SHEET C2.16
17. BMT, SEE C5 SERIES SHEETS
18. FIRE HYDRANT, SEE SHEET C4.05
19. 80' LIGHT POLE, SEE SHEET S1.01, DETAIL 1
20. RAIL LIGHT POLE, SEE SHEET S1.01, DETAIL 2
21. 8'x20' GUARD SHELTER
22. 12'x40' MOBILE OFFICE TRAILER (NIC)
23. 48'x40' QUONSET HUT. CONTRACTOR TO COMPLETE BUILDING PERMIT PRIOR TO INSTALLATION
24. POV PARKING STALL
26. ACCESSIBLE VAN PARKING STALL. SEE DETAIL 2 SHEET C2.09
27. ASPHALT CONTAINMENT BERM, SEE SHEET C2.09, DETAIL 2
28. "EMERGENCY ACCESS ONLY" SIGN, 2'X4' WITH 8" LETTERING

LEGEND:

PROPERTY LINE



SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

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PROJ. ENGR DATE
jtodd Apr 03, 2025

APPROVED:

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE LAYOUT - AREA 3

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	PRINTED BY:
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	PORT ADDRESS:

6688
C2.03
26 OF 105

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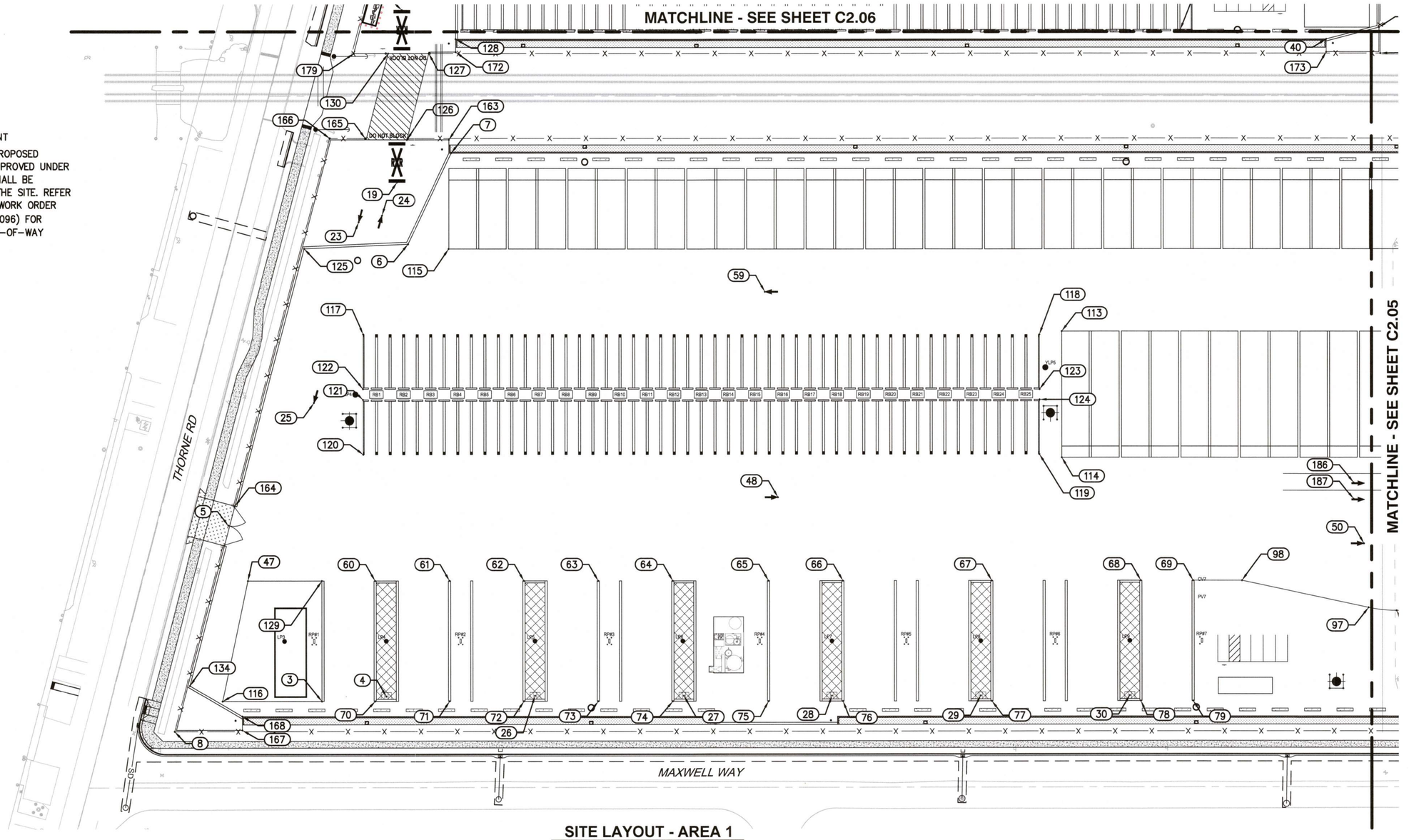
BINDING EDGE

SITE DEVELOPMENT

THE LIMITS OF PROPOSED IMPROVEMENT APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (W023-0096) FOR APPROVED RIGHT-OF-WAY IMPROVEMENTS.



SITE LAYOUT - AREA 1

SCALE: 1" = 40'

LEGEND:

PROPERTY LINE

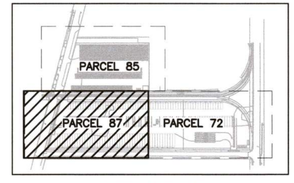
DROP INLET

PROJECT NORTH

TRUE NORTH

40' 0' 40' 80'

SCALE: 1"=40'



KEY PLAN

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Apr 03, 2025

APPROVED:
DIRECTOR ENG. DATE

PRINTED BY: jtodd Apr 03, 25

PORT ADDRESS:

DRAWING SCALE: AS NOTED

THORNE ROAD
OFF DOCK CONTAINER YARD
POINT CONTROL - AREA 1

6688
C2.04
27 OF 105

CONT./CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87

SECTION: 34

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BINDING EDGE

MATCHLINE - SEE SHEET C2.06

MATCHLINE - SEE SHEET C2.04

CONTRACTOR TO ARRANGE SEPARATE BUILDING PERMIT FOR GUARD SHACK

PORT OF TACOMA RD

MCDOWELL WAY

SITE DEVELOPMENT

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SITE LAYOUT - AREA 2

SCALE: 1" = 40'

LEGEND:

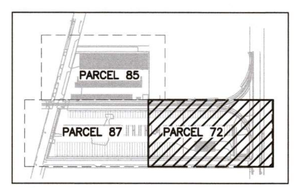
PROPERTY LINE

PROJECT NORTH

TRUE NORTH

40' 0' 40' 80'

SCALE: 1"=40'



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PORT ADDRESS:

6688
C2.05
28 OF 105

THORNE ROAD
OFF DOCK CONTAINER YARD
POINT CONTROL - AREA 2

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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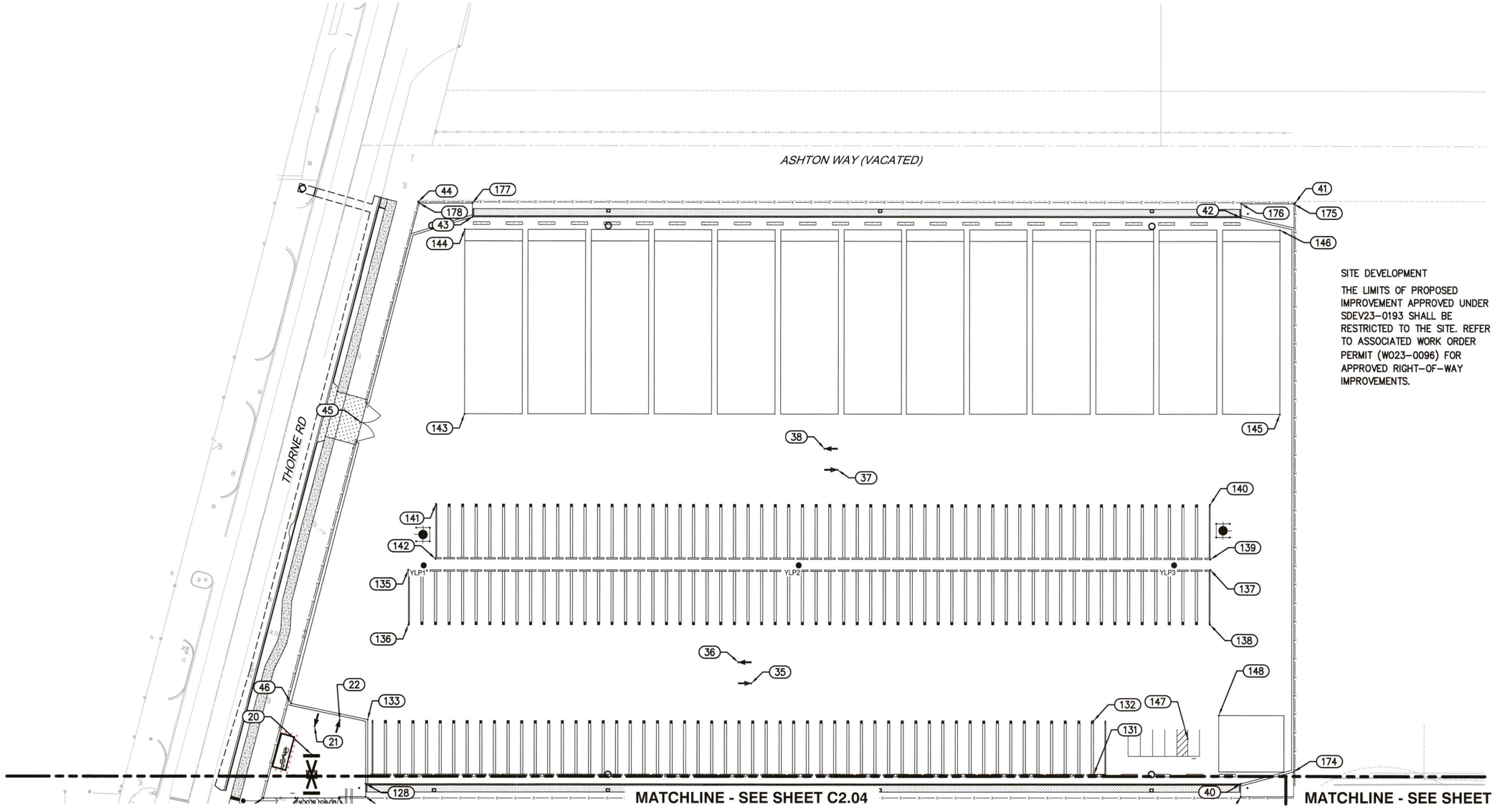
BINDING EDGE



SITE DEVELOPMENT

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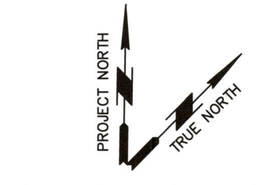
SITE LAYOUT - AREA 3

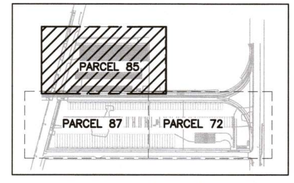
SCALE: 1" = 40'

LEGEND:

PROPERTY LINE



SCALE: 1"=40'



KEY PLAN

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PROJ. ENGR DATE
jtodd Apr 03, 2025

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
OFF DOCK CONTAINER YARD
POINT CONTROL - AREA 3

PRINTED BY: jtodd
PORT ADDRESS:

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
C2.06
29 OF 105

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PORT OF TACOMA FILE: Q:\SEA\10284-02\CADD_Active_SheetSet\10284022-C02.06

BINDING EDGE

CONTROL POINT DATA		
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2	708607.48	1167653.05
3	708570.82	1167622.37
4	708607.48	1167653.05
5	708610.78	1167482.15
6	708849.26	1167426.99
7	708918.40	1167401.55
8	708477.42	1167562.47
9	709360.24	1168418.37
10	709436.10	1168491.92
11	709379.98	1168370.00
12	709398.04	1168423.21
13	709437.58	1168473.13
14	709315.81	1168398.47
15	709752.10	1168798.28
16	709759.05	1168789.67
17	709854.99	1168690.67
18	709840.18	1168295.11
19	708874.87	1167388.83
20	708964.94	1167301.11
21	708980.87	1167287.90
22	708997.19	1167297.43
23	708834.23	1167390.00
24	708850.05	1167398.65
25	708718.55	1167461.84
26	708686.80	1167729.25
27	708765.78	1167805.82
28	708844.34	1167881.98
29	708923.31	1167958.55
30	709002.29	1168035.12
31	709449.99	1168406.91
32	709289.40	1168239.66
33	709424.01	1168413.36
34	709459.56	1168382.02
35	709233.19	1167488.87
36	709237.04	1167471.24
37	709386.80	1167421.23
38	709390.65	1167403.60
39	709462.29	1167827.23
40	709440.77	1167792.02
41	709764.18	1167515.84
42	709727.83	1167495.93
43	709321.82	1167102.30
44	709300.75	1167066.56
45	709158.94	1167151.93
46	708980.00	1167263.98
47	708592.92	1167521.23
48	708916.68	1167750.17
49	709540.55	1168355.90
50	709203.86	1168076.03

CONTROL POINT DATA		
POINT No.	NORTHING	EASTING
51	709269.34	1168108.11
52	709391.38	1168226.40
53	709378.16	1168240.05
54	709256.12	1168121.75
55	709242.90	1168135.39
56	709229.67	1168149.03
57	709828.17	1168511.84
58	709649.85	1168251.61
59	709014.49	1167635.64
60	708660.43	1167586.69
61	708699.92	1167624.97
62	708739.41	1167663.26
63	708778.90	1167701.54
64	708818.39	1167739.82
65	708869.19	1167789.07
66	708908.68	1167827.35
67	708987.65	1167903.92
68	709066.63	1167980.49
69	709094.39	1168007.40
70	708599.18	1167649.87
71	708638.67	1167688.15
72	708678.16	1167726.44
73	708717.65	1167764.72
74	708757.14	1167803.00
75	708807.93	1167852.25
76	708847.42	1167890.53
77	708926.40	1167967.10
78	709005.38	1168043.67
79	709033.14	1168070.58
80	709443.39	1168521.81
81	709847.82	1168287.19
82	709854.19	1168692.93
83	709364.93	1168253.69
84	709351.71	1168267.33
85	709338.48	1168280.97
87	709480.98	1168327.40
88	709443.22	1168499.13
89	709483.43	1168410.06
90	709365.89	1168301.28
91	709374.54	1168307.99
92	709415.88	1168404.81
93	709466.88	1168362.97
94	709465.79	1168292.27
95	709216.45	1168162.67
96	709187.15	1168128.00
97	709173.74	1168111.97
98	709120.48	1168032.69
99	709273.32	1168204.58
100	709286.54	1168190.93

CONTROL POINT DATA		
POINT No.	NORTHING	EASTING
101	709299.77	1168177.29
102	709312.99	1168163.65
103	709720.62	1168737.11
104	709802.64	1168652.51
105	709550.99	1168408.77
106	709781.34	1168548.06
107	709845.67	1168481.70
108	709846.66	1168398.87
109	709887.56	1168356.69
110	709325.02	1167976.94
111	709413.69	1167897.28
112	709260.69	1168043.29
113	709151.87	1167809.07
114	709087.54	1167875.42
115	708868.43	1167450.47
116	708518.24	1167571.40
117	708779.63	1167451.35
118	709138.26	1167799.27
119	709077.30	1167862.16
120	708718.44	1167514.47
121	708746.16	1167485.63
122	708751.66	1167479.95
123	709110.54	1167828.11
124	709105.26	1167833.55
125	708791.88	1167375.99
126	708901.68	1167371.67
127	708957.15	1167337.70
128	708978.75	1167344.10
129	708632.07	1167559.19
130	708935.61	1167316.82
131	709368.01	1167711.92
132	709395.04	1167683.80
133	709012.27	1167311.67
134	708508.97	1167546.39
135	709109.39	1167253.97
136	709081.66	1167282.80
137	709533.12	1167664.52
138	709505.16	1167693.12
139	709538.40	1167659.07
140	709566.12	1167630.24
141	709157.21	1167233.61
142	709129.25	1167262.21
143	709218.04	1167201.32
144	709311.55	1167104.87
145	709648.66	1167618.81
146	709742.17	1167522.35
147	709435.79	1167741.53
148	709463.82	1167745.05
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CONTROL POINT DATA		
POINT No.	NORTHING	EASTING
150	709496.66	1168363.15
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152	709372.81	1168398.95
153	709648.13	1168493.25
154	709431.12	1168426.30
155	709461.97	1168418.32
156	709436.29	1168400.59
157	709517.96	1168446.22
158	709553.29	1168017.08
159	709847.12	1168287.91
160	709560.25	1168009.90
161	709492.07	1167943.83
162	709485.12	1167950.99
163	708924.04	1167393.34
164	708624.14	1167475.26
165	708880.36	1167349.62
166	708861.45	1167331.29
167	708514.01	1167596.56
168	708520.97	1167589.38
169	709360.96	1168403.75
170	709354.26	1168410.66
171	709451.03	1168491.07
172	708972.18	1167350.87
173	709434.29	1167798.71
174	709474.89	1167812.91
175	709762.76	1167515.87
176	709734.79	1167488.75
177	709328.78	1167095.12
178	709300.61	1167067.82
179	708917.31	1167299.08
180	709476.27	1168432.66
181	709537.19	1168394.97
182	709406.72	1168402.63
183	709445.53	1168438.95
184	709406.14	1168327.39
185	709430.98	1168328.17
186	709229.50	1168038.74
187	709221.15	1168047.35
188	709372.34	1168177.21
189	709363.99	1168185.82
190	709422.10	1168440.06

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THORNE ROAD
OFF DOCK CONTAINER YARD
POINT COORDINATE TABLE

6688
C2.07
30 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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BINDING EDGE

SITE DEVELOPMENT

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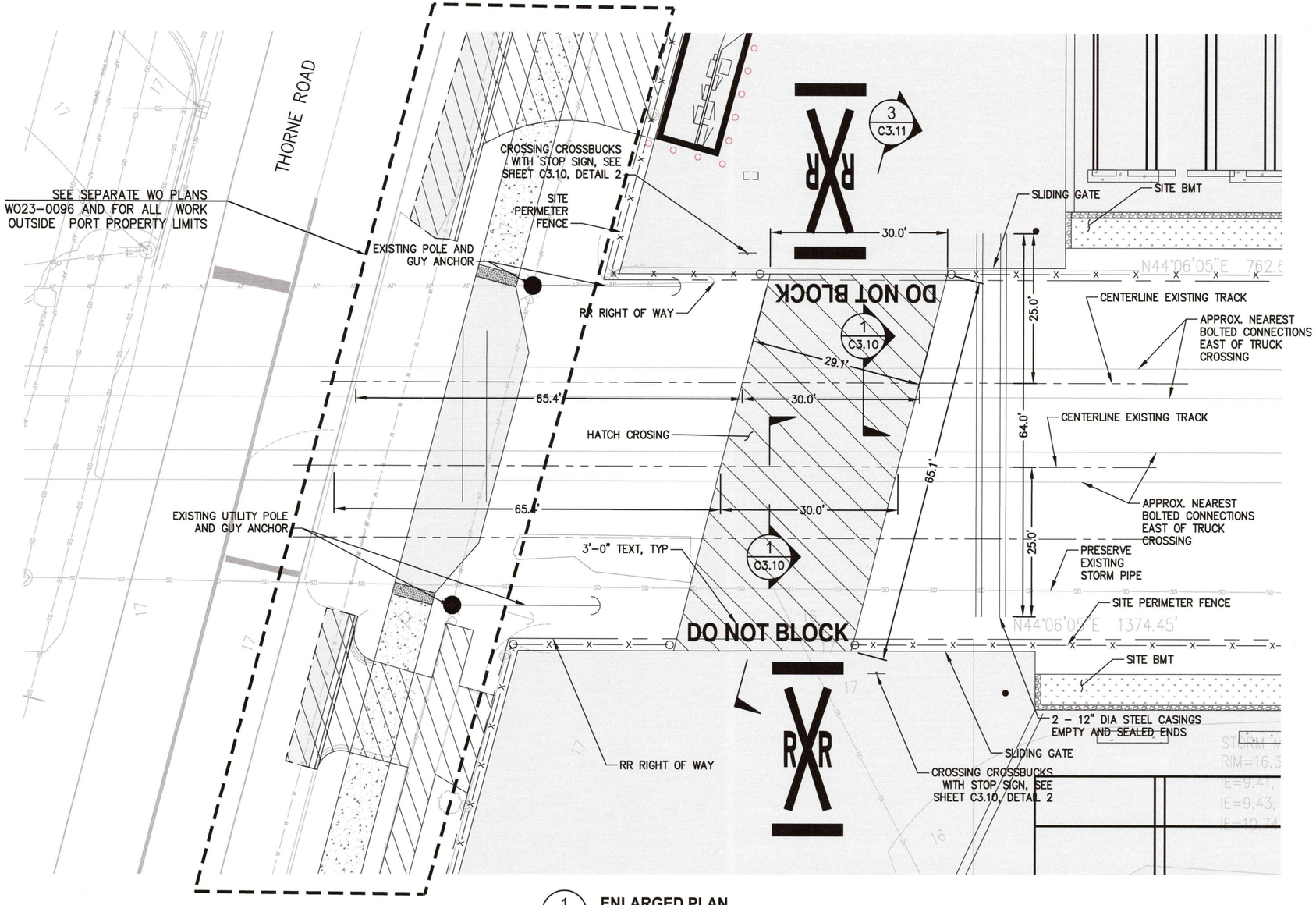
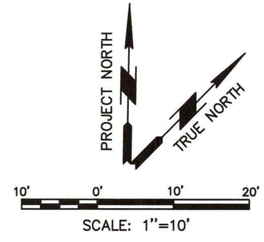


1 C2.01 **ENLARGED PLAN**
SCALE: 1" = 10'

NOTE:

1. WORK WITHIN TACOMA RAIL RIGHT OF WAY IS REVIEWED BY TACOMA RAIL THIS WORK IS NOT REVIEWED AS PART OF SITE DEVELOPMENT SDEV 23-0193 AND IS NOT REVIEWED AS PART OF WO23-0096
2. ALL TRACK CONSTRUCTION SHALL CONFORM TO PLANS AND UPRR STANDARDS FOR INDUSTRIAL TRACK CONSTRUCTION.
3. SAW CUT CLEAN EDGE OF RAIL AT LEAST 8FT FROM THE EXISTING CROSSING SURFACE TO REMAIN. PLACE NEW RAIL TO NEAREST EXISTING BOLTED CONNECTION EAST OF THE NEW TRUCK CROSSING.
4. ALL RAIL SHALL BE CONTINUOUS WELDED WITHIN
5. STEEL CASING PIPES SHALL BE INSTALLED PER AREMA STANDARDS AT 4.5 FEET BELOW BOTTOM OF TIE. ALL SUBBALAST AND BALLAST SHALL BE REPLACED WITHIN LIMITS OF CONSTRUCTION. WALL THICKNESS SHALL BE 0.188 AND COATED PER AREMA. THE CASING ENDS SHALL BE SEALED WITH A MECHANICAL JOINT PIPE CAP.
6. ALL TRACK OUTAGES ARE SUBJECT TO THE APPROVAL OF TACOMA RAIL.
7. CONTRACTOR IS RESPONSIBLE FOR FLAGGING AND RIGHT OF ENTRY FOR WORK INSIDE RAILROAD RIGHT OF WAY.



SCALE: 1"=10'

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DATE: 2025-08-25

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CHECKED BY	DATE		
JT 4/2/2025			
DIRECTOR ENG.	DATE	PROJ. ENGR	DATE
		jtodd Apr 03, 2025	

APPROVED:

THORNE ROAD
OFF DOCK CONTAINER YARD
ENLARGED PLAN - RR CROSSING

6688
C2.08
31 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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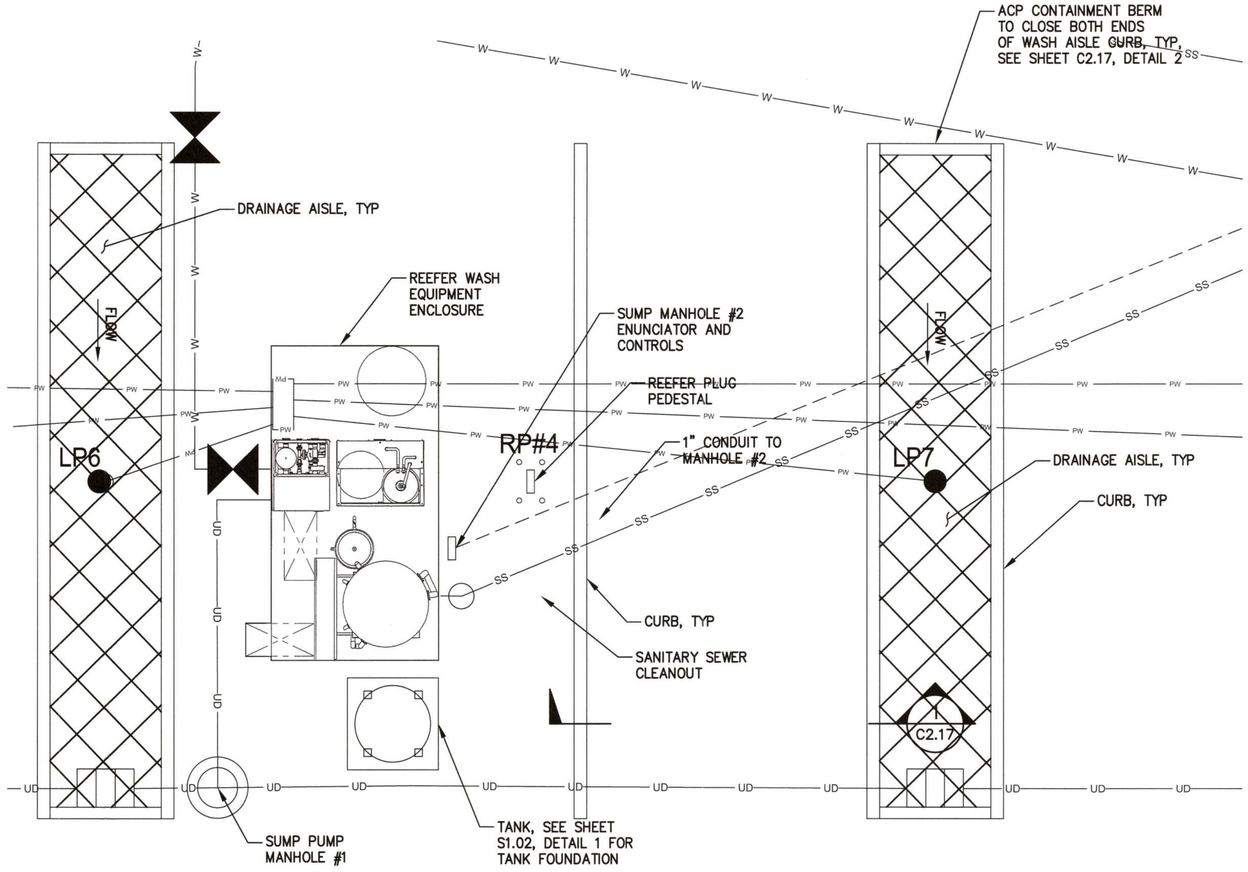
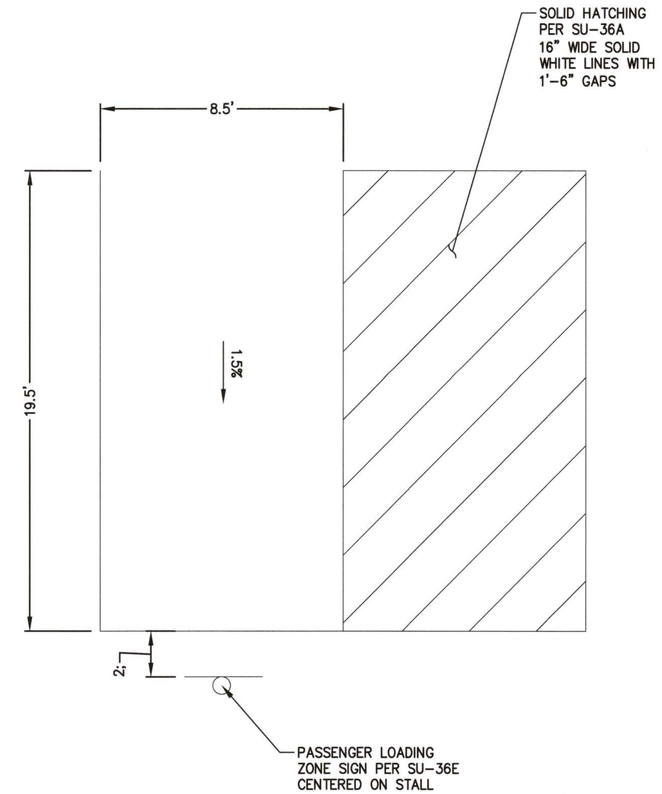


1 C2.01 **ENLARGED PLAN - REEFER WASH**
SCALE: 1" = 10'

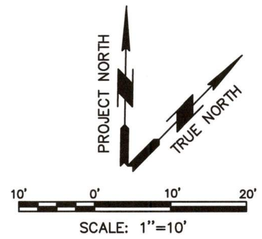
NOTE: BOTH HANDICAP PARKING STALLS ARE LOCATED IN THE SITE WITH 1.5% SLOPE IN LINE WITH THE STALL AND 0% CROSS SLOPE.



2 C2.01 (C2.03) **HANDICAP PARKING**
SCALE: 1" = 10'

LINE KEY:

- PW — PROCESS WATER LINE
- NGAS — BURIED GAS LINE
- W — W — BURIED POTABLE WATER LINE
- UD — UD — DRAIN LINE
- WATER VALVE
- CATCH BASIN



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SUITE# 610
SEATTLE, WA 98101
(206) 622-0222

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THORNE ROAD
OFF DOCK CONTAINER YARD
REEFER WASH

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		

6688
C2.09
32 OF 105

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

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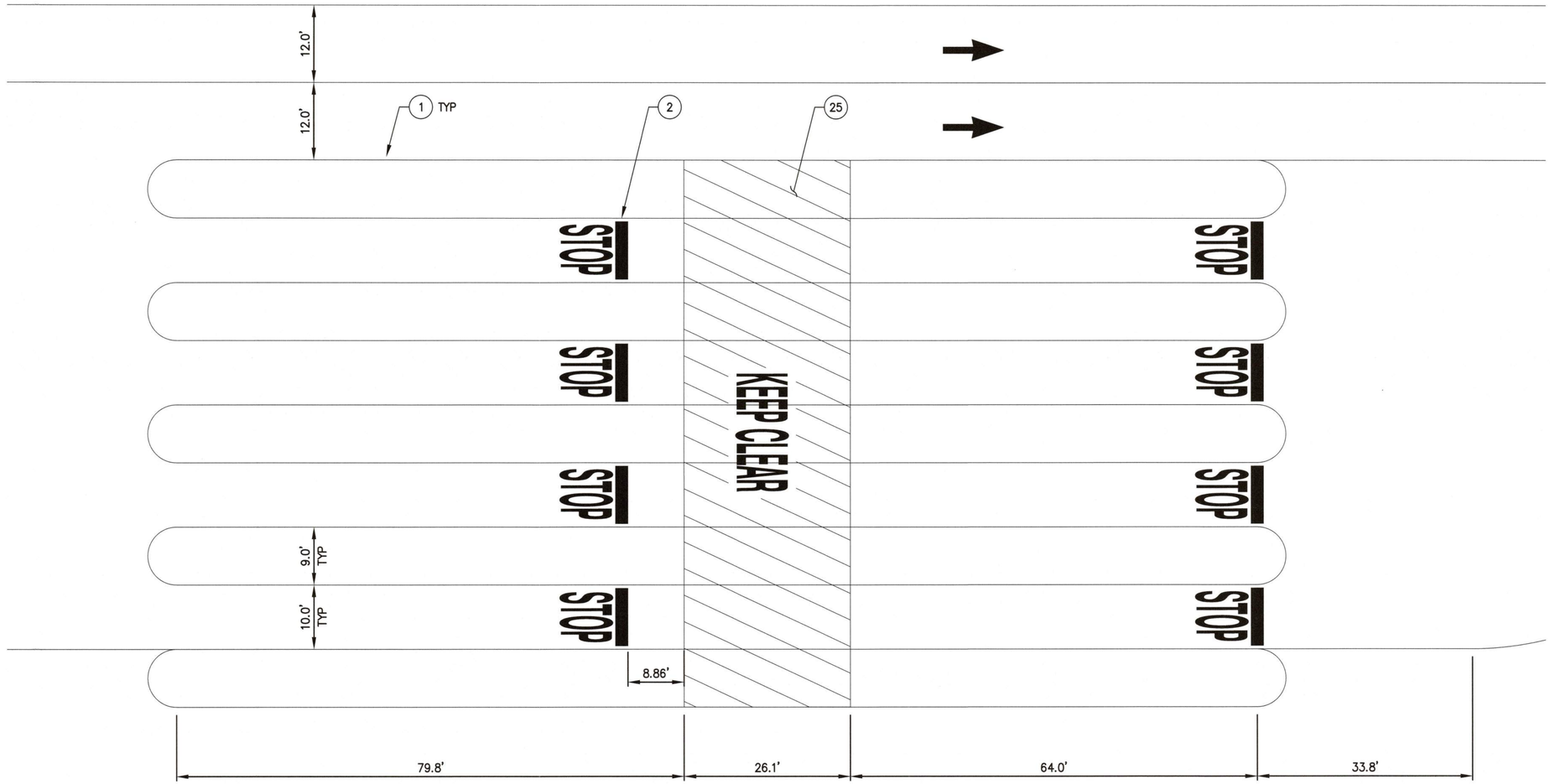
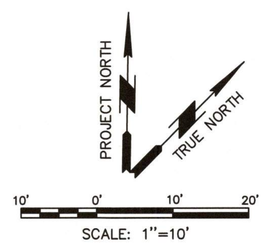


1 C2.02 **ENLARGED PLAN - ROADABILITY**
SCALE: 1" = 10'

KEY NOTES:

1. 4" WIDE WHITE STRIPE
2. STOP BAR AND SYMBOL, SEE SHEET C2.12, DETAIL 1
25. 45 DEGREE STRIPING



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THORNE ROAD
OFF DOCK CONTAINER YARD
ROADABILITY

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
C2.10
33 OF 105

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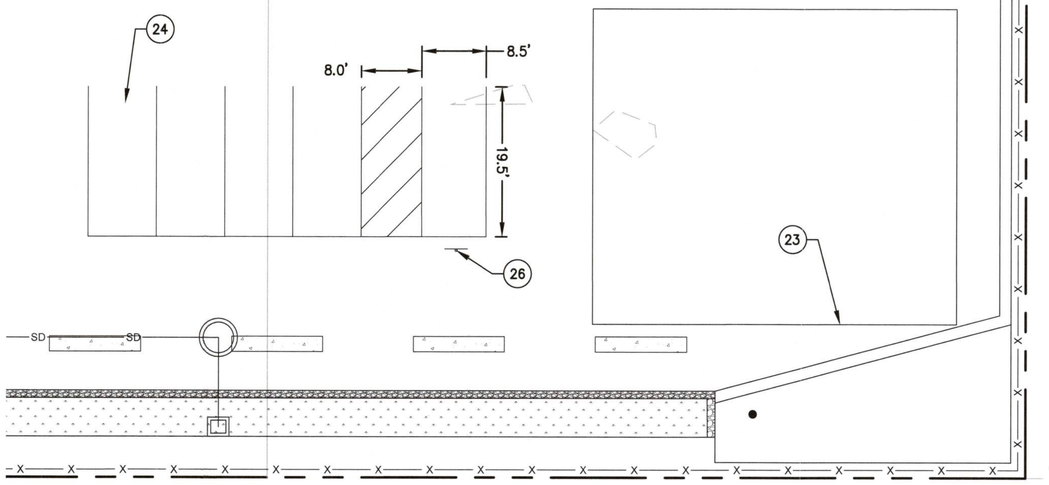
BUILDING NOTES
1. CONTRACTOR WILL BE REQUIRED TO ACQUIRE BUILDING FOR QUONSET HUT. HUT PROVIDES AREA FOR LIGHT MAINTENANCE AND REPAIR OF CHASSIS.
2. HANDICAP SPOT AND CIRCULATION IS ACCESSIBLE IN ALL DIRECTIONS. OVERALL SITE SLOPE IS LESS THAN 1.5% WITHIN THE FACILITY. ACCESSIBLE MOVEMENT IS POSSIBLY THROUGHOUT AREA.

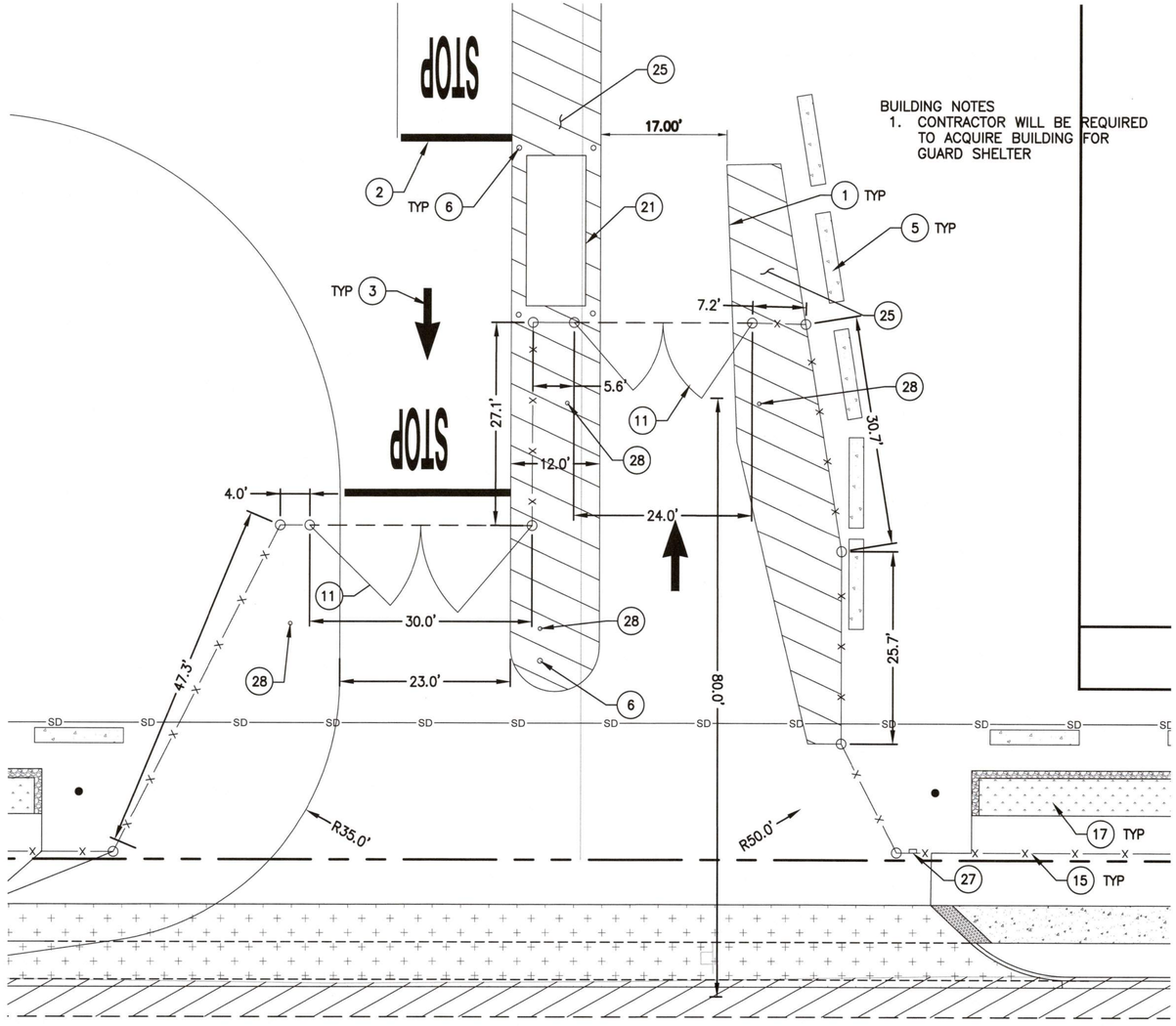
SITE DEVELOPMENT

THE LIMITS OF PROPOSED IMPROVEMENT APPROVED UNDER SDEV23-0193 SHALL BE RESTRICTED TO THE SITE. REFER TO ASSOCIATED WORK ORDER PERMIT (W023-0096) FOR APPROVED RIGHT-OF-WAY IMPROVEMENTS.



1 C2.03 **ENLARGED PLAN - ADA PARKING**
SCALE: 1" = 10'

BUILDING NOTES
1. CONTRACTOR WILL BE REQUIRED TO ACQUIRE BUILDING FOR GUARD SHELTER



2 C2.02 **ENLARGED PLAN - MAIN GATE**
SCALE: 1" = 10'

KEY NOTES:

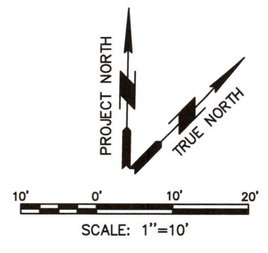
1. 4" WIDE WHITE STRIPE
2. STOP BAR AND SYMBOL, SEE SHEET C2.12, DETAIL 1
3. CHANNELIZATION ARROW, SEE SHEET C2.12, DETAIL 2
5. TYPE II CONC TRAFFIC BARRIER, SEE SHEET C2.13, DETAIL 1
6. 8" DIA BOLLARD, SEE SHEET C2.13, DETAIL 2
11. SWING GATE IN LENGTHS SHOWN, SEE C2.16, DETAIL 4
15. SECURITY FENCING, SEE SHEET C2.16
17. BMT, SEE C5 SERIES SHEETS
22. 12'x40' MOBILE OFFICE TRAILER (NIC)
24. POV PARKING STALL
25. 45 DEGREE STRIPING
26. ACCESSIBLE VAN PARKING STALL. NOTE PAVEMENT GRADES <1.5% ALLOW ACCESSIBLE MOVEMENT THROUGHOUT AREA SEE DETAIL 2 ON SHEET C2.09
27. KEY BOX. SEE NOTE
28. FIELD LOCATE GATE HOLDER

KEY BOX NOTES:

PROVIDE A KNOX™ BOX OR KNOX™ VAULT OUTSIDE THE MAIN ENTRANCE GATE AND BOTH EMERGENCY GATES WITH ALL KEYS TO ACCESS THE BUILDINGS AND GATES. THE TOP OF THE BOX SHALL BE MOUNTED BETWEEN 66-INCHES AND 72-INCHES ABOVE FINISHED GRADE. THE LOCK SPECIFICATION IS A ONE-INCH CYLINDER CAM LOCK KEY #39504. PRIOR TO INSTALLATION, CONTACT THE FIRE PREVENTION BUREAU AT (253) 591-5740 TO SET UP A PRE-INSTALLATION INSPECTION TO APPROVE THE LOCATION OF THE BOX

LEGEND:

PROPERTY LINE



SCALE: 1"=10'

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THORNE ROAD
OFF DOCK CONTAINER YARD
MAIN GATE

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87		DRAWING SCALE: AS NOTED	

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C2.11
34 OF 105

CONT/CONS:	071908
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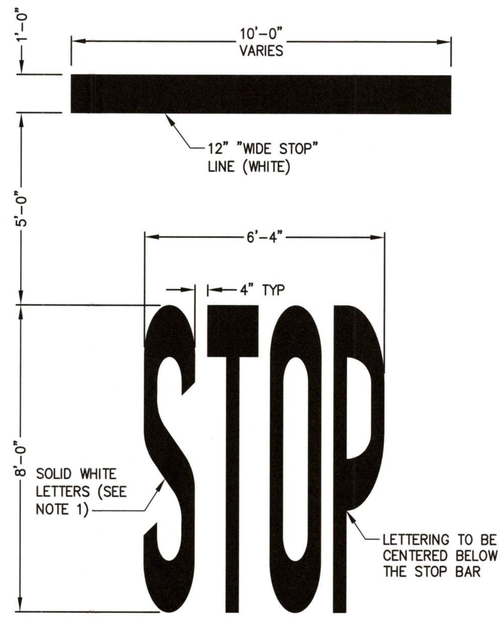
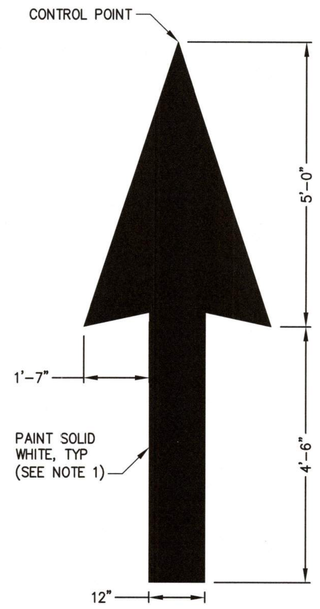
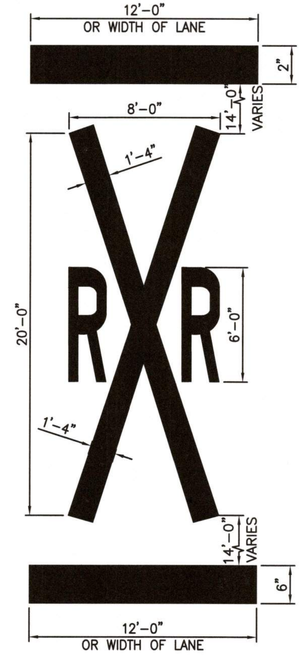


1 / C2.03, C2.04 **STOP BAR AND SYMBOL DETAIL**
SCALE: NTS



2 / C2.02 **CHANNELIZATION ARROW DETAIL**
SCALE: NTS



3 / C2.02 **RAILROAD CROSSING DETAIL**
SCALE: NTS

NOTES:

1. PAVEMENT MARKINGS SHALL BE PER THE MUTCD GUIDELINES. SUBMIT DETAILED MARKING DETAILS FOR APPROVAL.
2. SIGNS SHALL BE PER THE MUTCD GUIDELINES. SUBMIT DETAILED SIGN DETAILS FOR APPROVAL.

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C2.12
35 OF 105

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - PAVEMENT MARKINGS & SIGNS

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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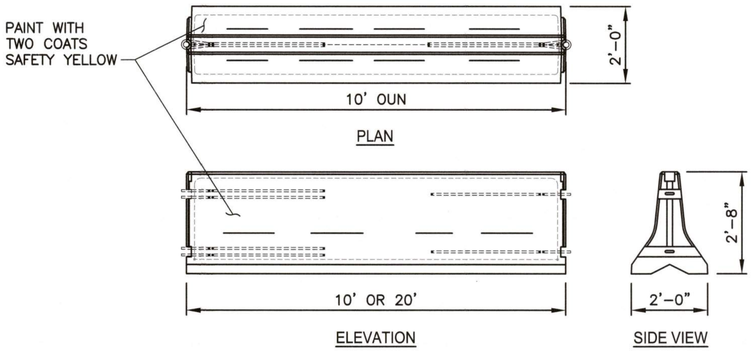
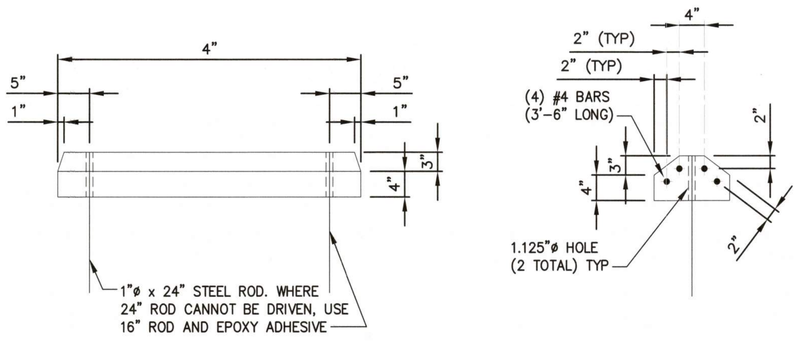
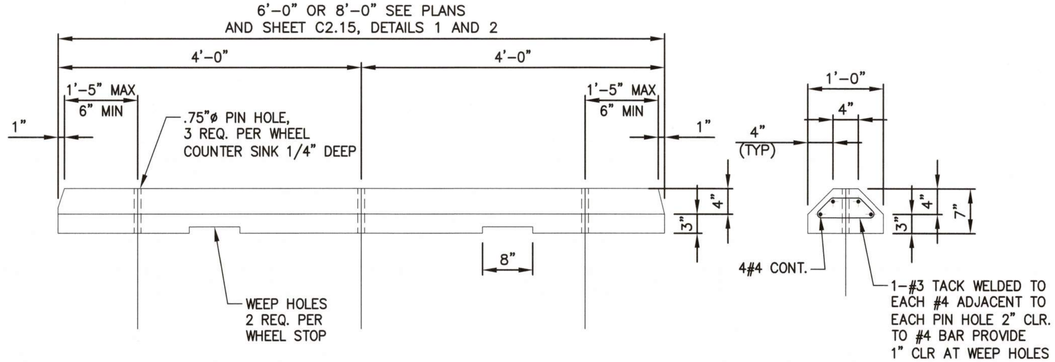


1 / – **DETAIL - TYPE II CONC TRAFFIC BARRIER**
SCALE: NTS



4 / – **DETAIL - 4' TRUCK WHEEL STOP**
SCALE: 1"=1'–0"



NOTES:
1. ANCHOR PINS SHALL BE #5 BARS 24" LONG
FILL TOP OF PIN HOLE WITH EPOXY

5 / – **DETAIL - 6' & 8' TRUCK WHEEL STOP**
SCALE: 1"=1'–0"

2' 0' 2' 4'
SCALE: 1/2"=1'

1' 0' 1' 2'
SCALE: 1"=1'

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THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - BARRIERS

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C2.13
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CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	PORT ADDRESS:
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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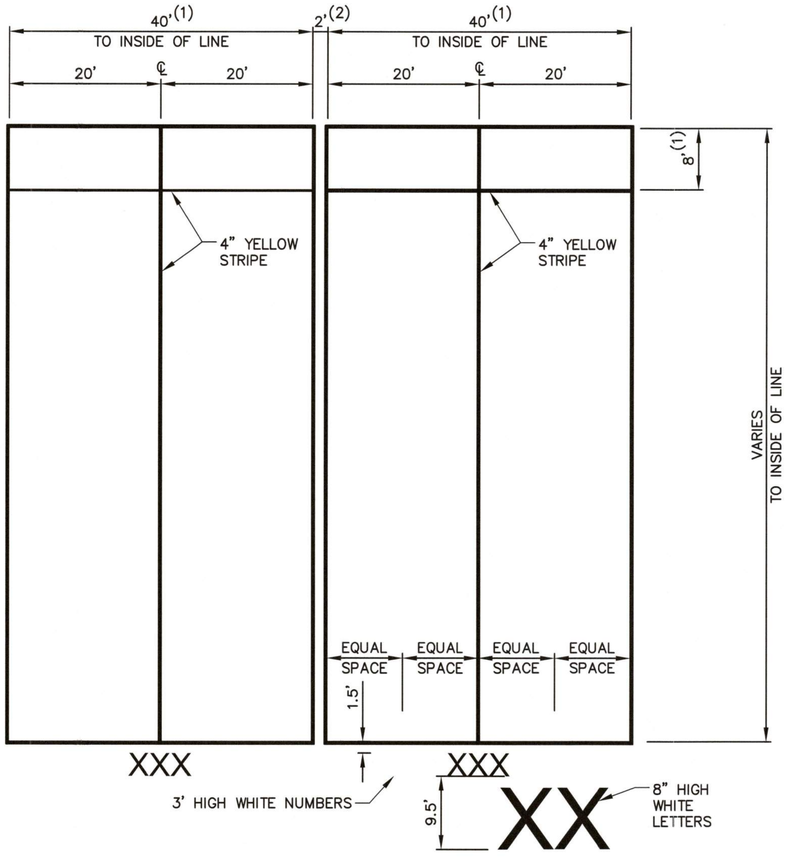
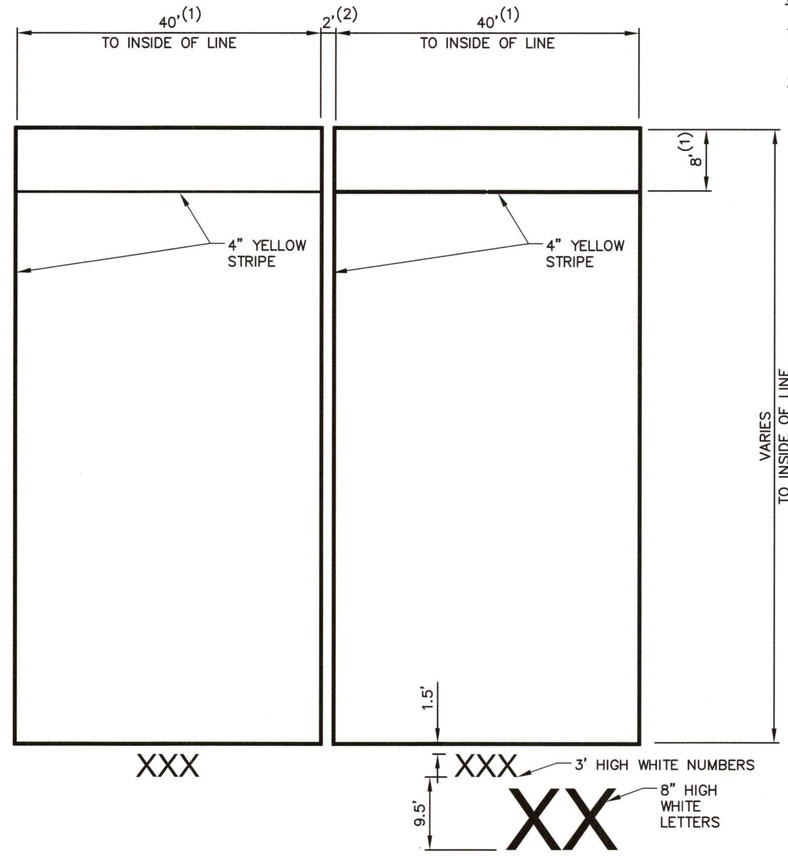


NOTES:
(1) DIMENSIONS ARE TO THE INSIDE EDGE OF STRIPING.
(2) DIMENSION INCLUDES PAINTED STRIPE.

1 / C2.01 (C2.02) **DETAIL - EMPTY AREA STRIPING**
SCALE: NTS



NOTES:
(1) DIMENSIONS ARE TO THE INSIDE EDGE OF STRIPING.
(2) DIMENSION INCLUDES PAINTED STRIPE.

2 / C2.02 **DETAIL - CHASSIS STORAGE STRIPING**
SCALE: NTS

NOTES:

1. ACTUAL NUMBERS/LETTERS TO BE PROVIDED AT A LATER DATE.
2. ALL STRIPING SHALL BE 4" WIDE WHITE STRIPING UNLESS OTHERWISE NOTED.

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THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - CONTAINER AND CHASSIS STRIPING

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT–HRZ:	VERT:	PORT ADDRESS:
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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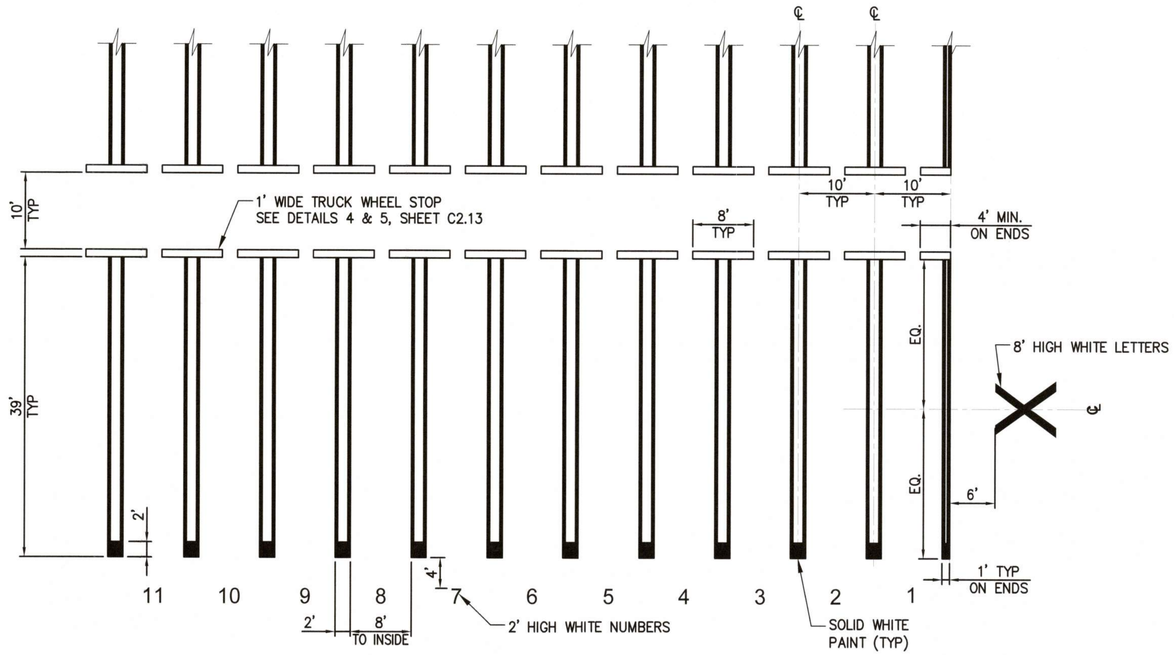
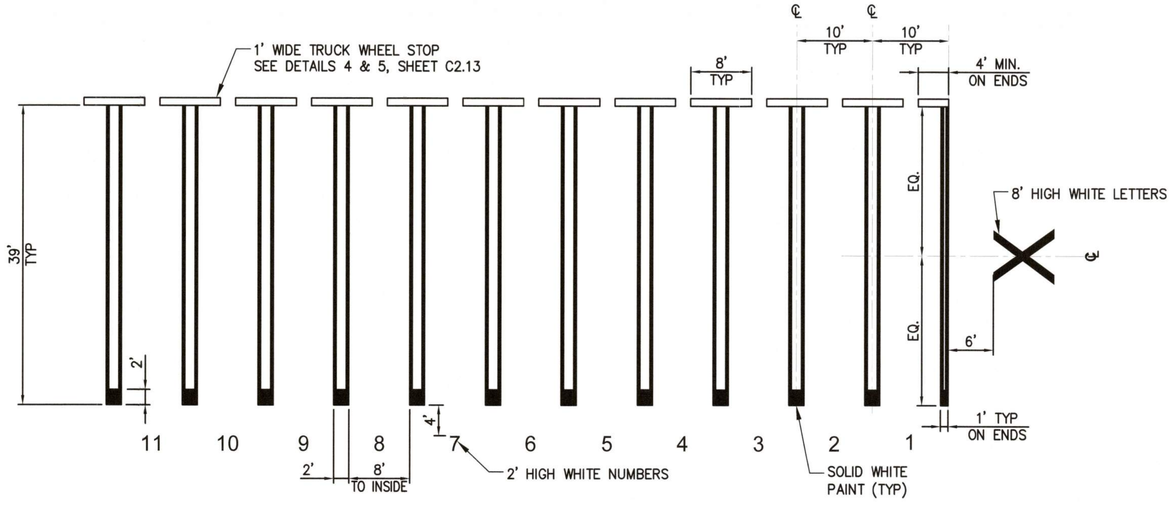


1 / C2.01 **40' WHEELED REEFER VALET STRIPING DETAIL**
SCALE: 1"=10'



2 / C2.03 **CHASSIS STALL STRIPING DETAIL**
SCALE: 1"=10'

10' 0' 10' 20'
SCALE: 1"=10'

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THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - STALL STRIPING

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87			

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C2.15
38 OF 105

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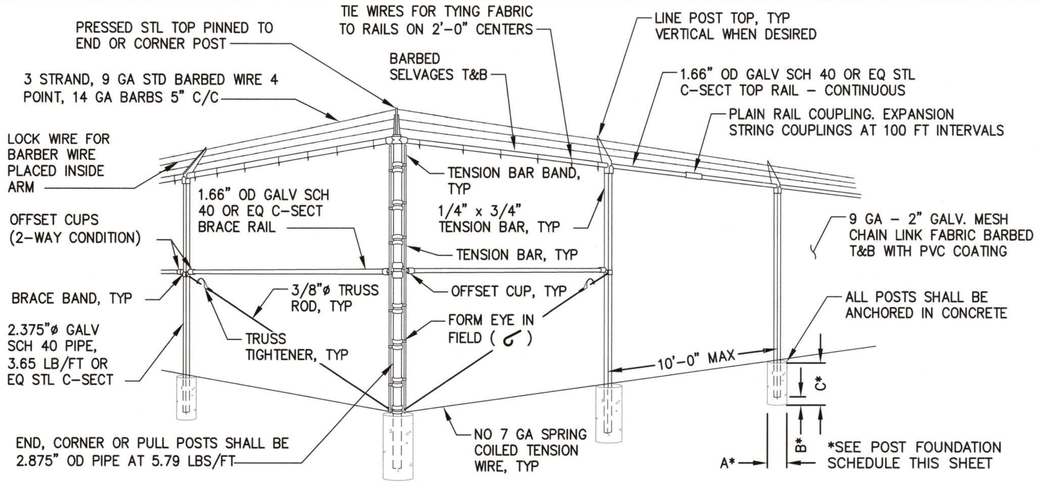
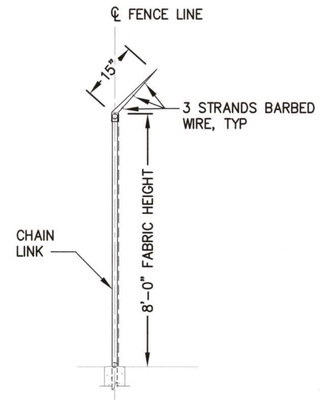


1 – **TYPICAL FENCE PERSPECTIVE**
SCALE: NTS

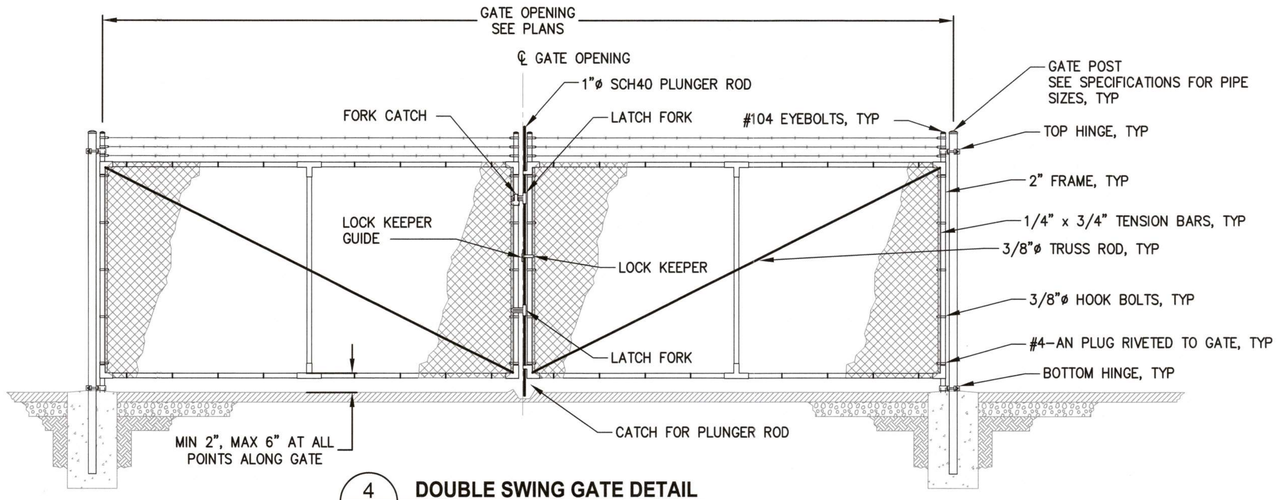


2 – **TYPICAL FENCE SECTION**
SCALE: NTS

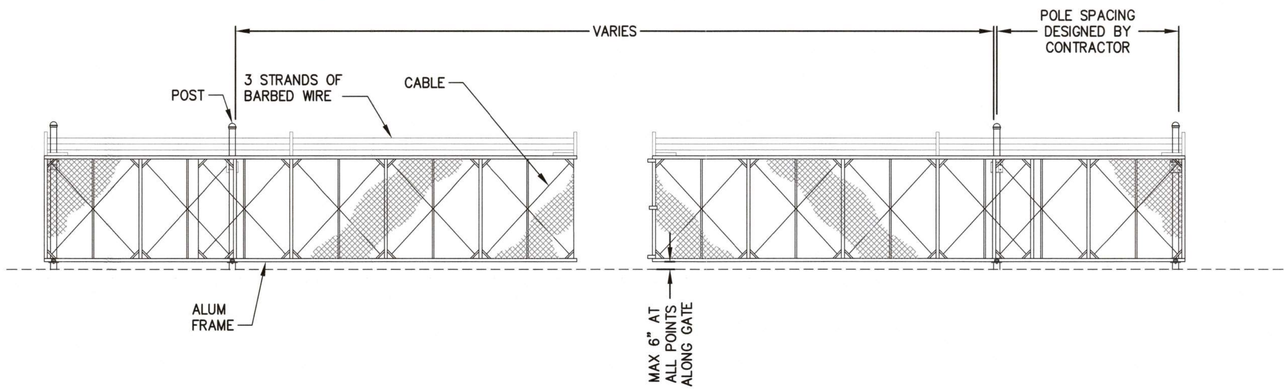
POST FOUNDATION DIMENSIONS AND REINFORCEMENT SCHEDULE				
LOCATION	A	B	C	STEEL REINF AND NOTES
FENCE, MAN GATE, AND TURNSTILE POSTS				
LINE	0'-10"	0'-6"	3'-0"	NONE
CORNER/END	1'-0"	0'-6"	3'-6"	NONE
PEDESTRIAN ACCESS GATE HINGE POST	1'-4"	0'-6"	3'-6"	NONE
DOUBLE LEAF SWING GATE POST	2'-0"	0'-6"	6'-0"	SEE NOTE A
SWING GATE, LATCH POLE	2'-0"	0'-6"	4'-6"	NOTE A
DOUBLE LEAF SWING GATE, HINGE POLE	2'-0"	0'-6"	6'-0"	NOTE A
DOUBLE LEAF SLIDING GATE POLE	CONTRACTOR DESIGNED			

A. PROVIDE 8 EQUALLY SPACED VERTICAL #6 BARS AND HORIZONTAL #4 TIES AT 6" ON CENTER. ADJUST REINF LENGTH TO MATCH SPECIFIED FOUNDATION DIAMETER AND DEPTH.

3 – **POST FOUNDATION DIMENSION**
SCALE: NTS



4 – **DOUBLE SWING GATE DETAIL**
SCALE: NTS



5 – **SLIDING GATE ELEVATION**
SCALE: 1" = 5'

KEY BOX NOTES:

PROVIDE A KNOX™ BOX OR KNOX™ VAULT OUTSIDE THE MAIN ENTRANCE GATE AND BOTH EMERGENCY GATES WITH ALL KEYS TO ACCESS THE BUILDINGS AND GATES. THE TOP OF THE BOX SHALL BE MOUNTED BETWEEN 66-INCHES AND 72-INCHES ABOVE FINISHED GRADE. THE LOCK SPECIFICATION IS A ONE-INCH CYLINDER CAM LOCK KEY #39504. PRIOR TO INSTALLATION, CONTACT THE FIRE PREVENTION BUREAU AT (253) 591-5740 TO SET UP A PRE-INSTALLATION INSPECTION TO APPROVE THE LOCATION OF THE BOX

NOTES:

1. ALL FENCE AND GATE FABRIC, FRAMEWORK, FITTINGS, TIES, POSTS AND BARBED WIRE SHALL BE GALVANIZED AND PVC COATED, COLOR BLACK.
2. SWING GATES INCLUDE GATE CATCH FOR FULL OPEN GATES.

5' 0' 5' 10'
SCALE: 1"=5'

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THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - FENCING & SLIDING GATE

6688
C2.16
39 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
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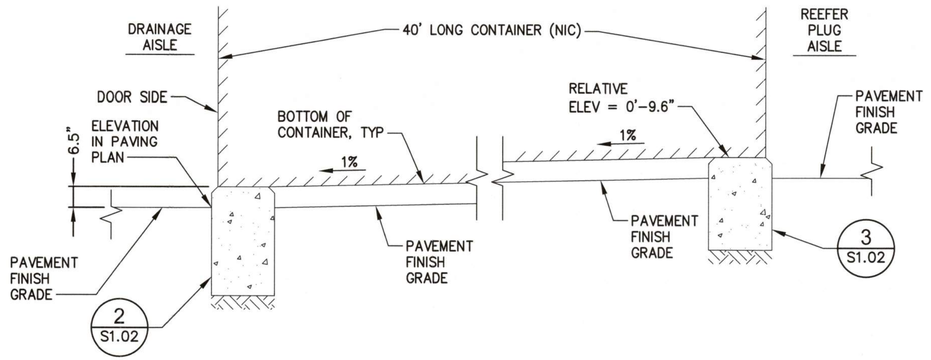
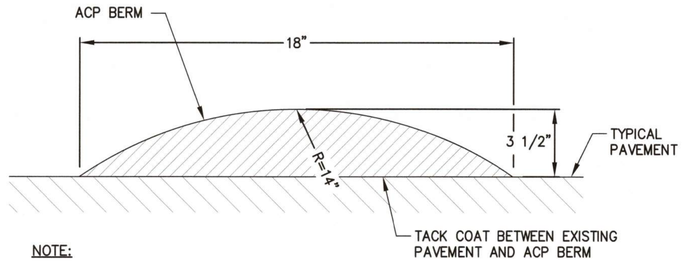


1 C2.09 SECTION - REEFER WASH AREA
SCALE: 1/2" = 1'-0"



NOTE:

CONTROL POINTS ARE AT CENTER OF BERM

2 C2.09 ACP CONTAINMENT BERM
SCALE: NTS

1. SEE GRADING SHEETS FOR LONGITUDINAL AND TRANSVERSE GRADES IN REFER WASHDOWN AISLES

2' 0' 2' 4'
SCALE: 1/2"=1'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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JT 4/2/2025 CHECKED BY DATE
jtodd Apr 03, 2025 PROJ. ENGR DATE

APPROVED:
DIRECTOR ENG. DATE
PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - REEFER WASH

6688
C2.17
40 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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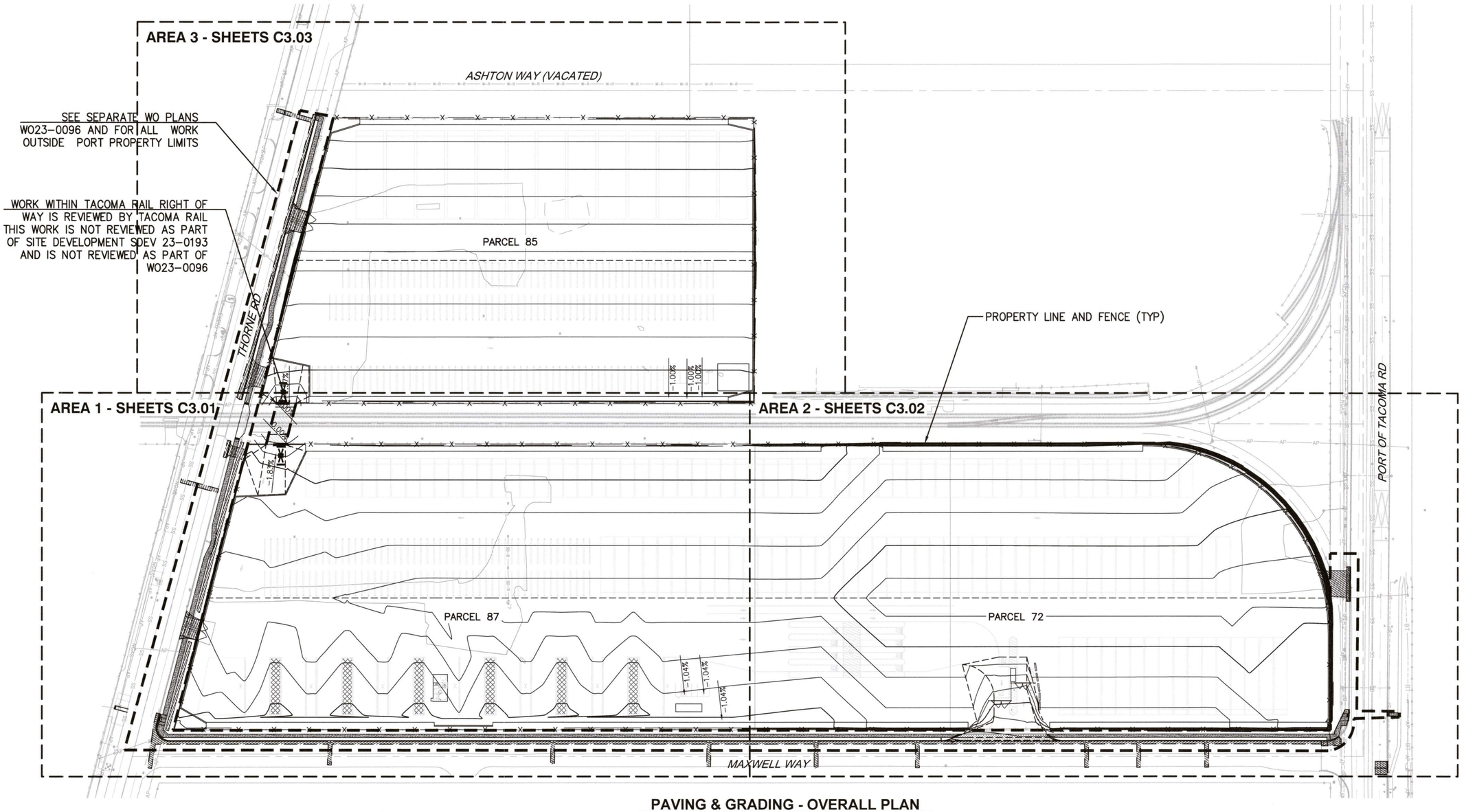
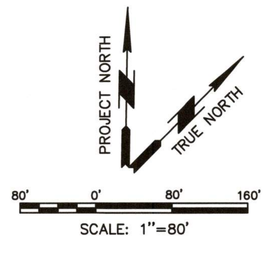
BINDING EDGE



PAVING & GRADING - OVERALL PLAN

SCALE: 1" = 80'



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DATE: 2025-08-25

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THORNE ROAD
OFF DOCK CONTAINER YARD
PAVING AND GRADING

6688
C3.00
41 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
M. ID:	101241.01	DAT-HRZ:	VERT:	DRAWING SCALE:	AS NOTED
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87		

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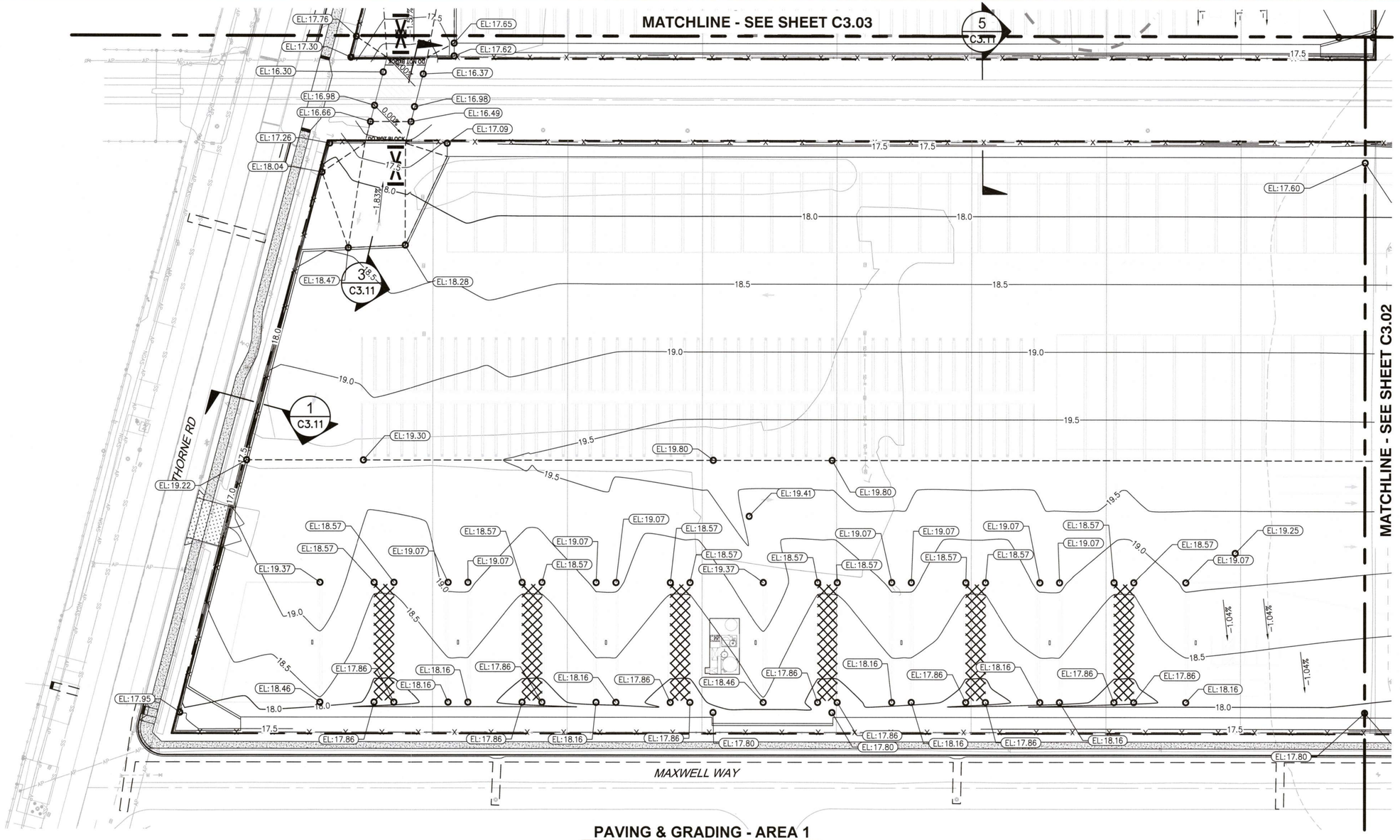


PAVING & GRADING - AREA 1

SCALE: 1" = 40'

LEGEND:

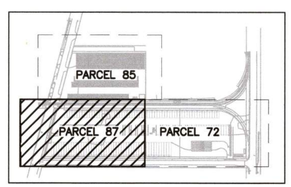
- PROPERTY LINE
- PAVEMENT BREAKLINE
- MAJOR CONTOUR (2.0FT INTERVAL)
- MINOR CONTOUR (0.5FT INTERVAL)

PROJECT NORTH

TRUE NORTH

40' 0' 40' 80'

SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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CHECKED BY EK 4/3/2025
PROJ. ENGR JT 4/2/2025

THORNE ROAD
OFF DOCK CONTAINER YARD
PAVING AND GRADING - AREA 1

6688
C3.01
42 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ:	VERT:
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

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BINDING EDGE

MATCHLINE - SEE SHEET C3.03

MATCHLINE - SEE SHEET C3.01

PORT OF TACOMA RD

YELL WAY

4 C3.11

2 C3.11

PAVING & GRADING - AREA 2

SCALE: 1" = 40'

LEGEND:

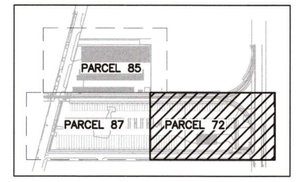
- PROPERTY LINE
- PAVEMENT BREAKLINE
- MAJOR CONTOUR (2.0FT INTERVAL)
- MINOR CONTOUR (0.5FT INTERVAL)

PROJECT NORTH

TRUE NORTH

40' 0' 40' 80'

SCALE: 1"=40'



KEY PLAN

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THORNE ROAD
OFF DOCK CONTAINER YARD
PAVING AND GRADING - AREA 2

6688
C3.02
43 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	DRAWING SCALE: AS NOTED
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

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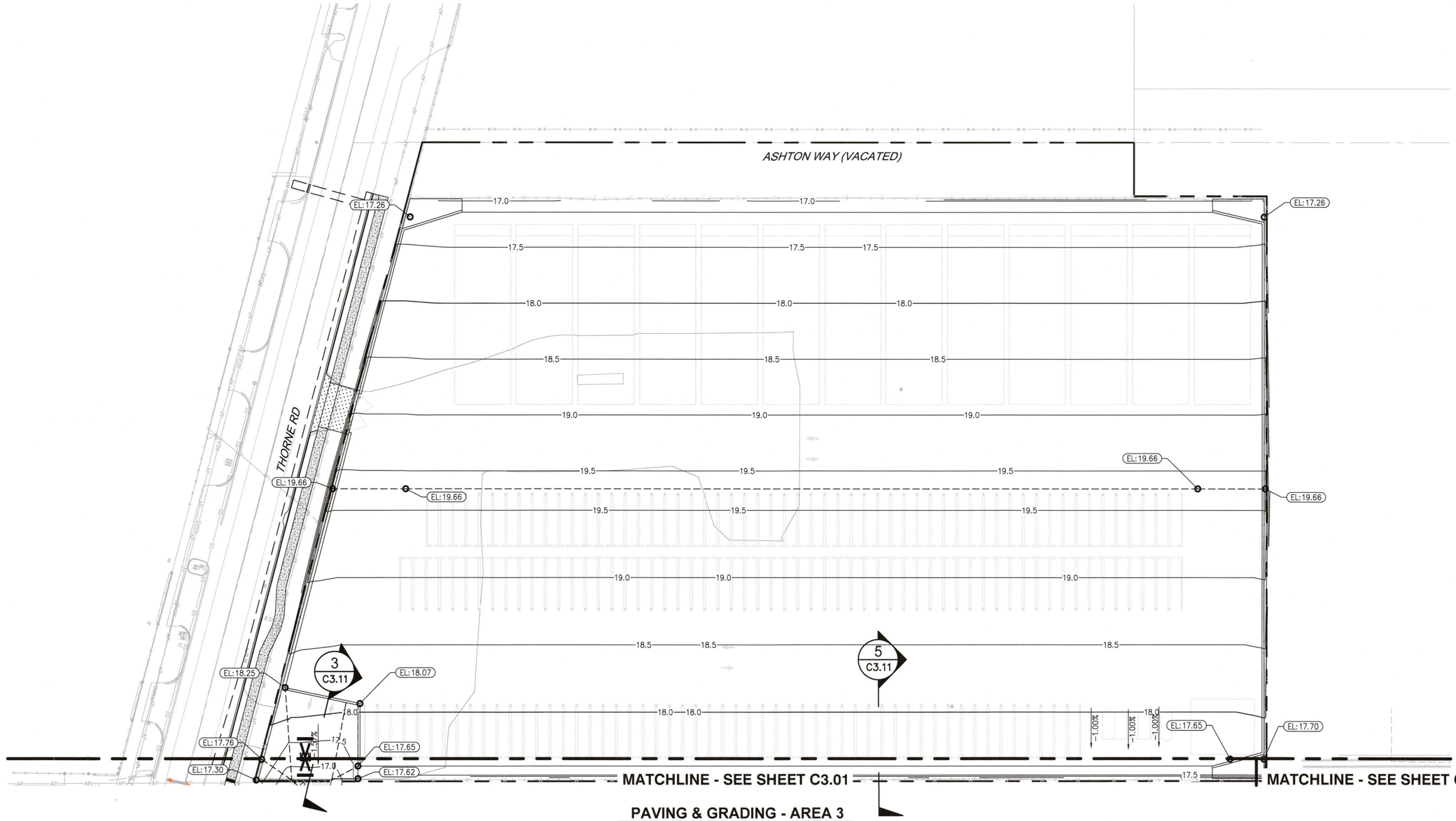


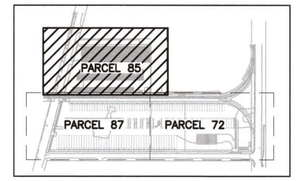
PAVING & GRADING - AREA 3
SCALE: 1" = 40'

LEGEND:

- PROPERTY LINE
- PAVEMENT BREAKLINE
- MAJOR CONTOUR (2.0FT INTERVAL)
- MINOR CONTOUR (0.5FT INTERVAL)

PROJECT NORTH
TRUE NORTH

40' 0' 40' 80'
SCALE: 1"=40'



KEY PLAN

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THORNE ROAD
OFF DOCK CONTAINER YARD
PAVING AND GRADING - AREA 3

6688
C3.03
44 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	DRAWING SCALE: AS NOTED
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

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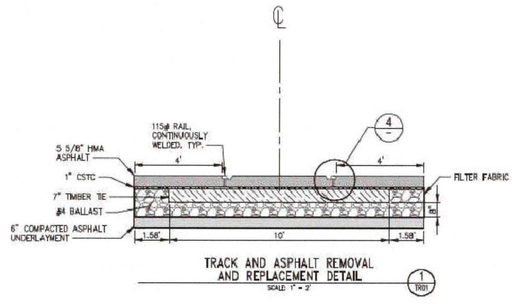
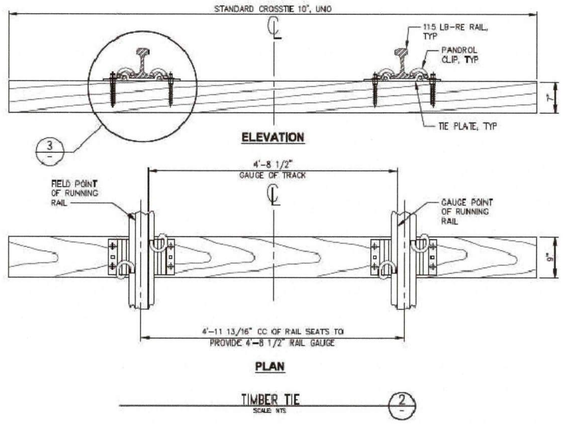
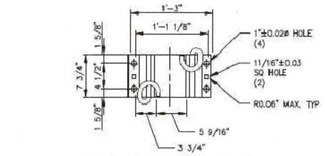


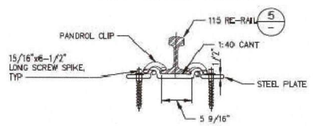
TRACK AND ASPHALT REMOVAL AND REPLACEMENT DETAIL
SCALE: 1" = 2'



TIMBER TIE
SCALE: NTS

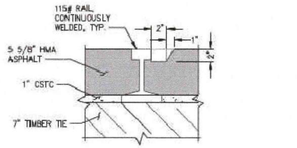


TYPICAL STANDARD PLATE FOR PANDROL TYPE e2055 CLIP

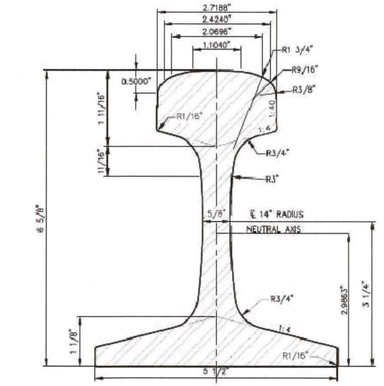


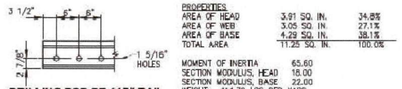
PANDROL TYPE e2055 CLIPS ON TIMBER TIES

TIMBER TIE FASTENERS WITH 115# RAIL
SCALE: NTS



ASPHALT FLANGEWAY DETAIL
SCALE: NTS





DRILLING FOR RE 115# RAIL

PROPERTIES:

AREA OF HEAD	3.91 SQ. IN.	34.8%
AREA OF WEB	3.05 SQ. IN.	27.1%
AREA OF BASE	4.29 SQ. IN.	38.1%
TOTAL AREA	11.25 SQ. IN.	100.0%

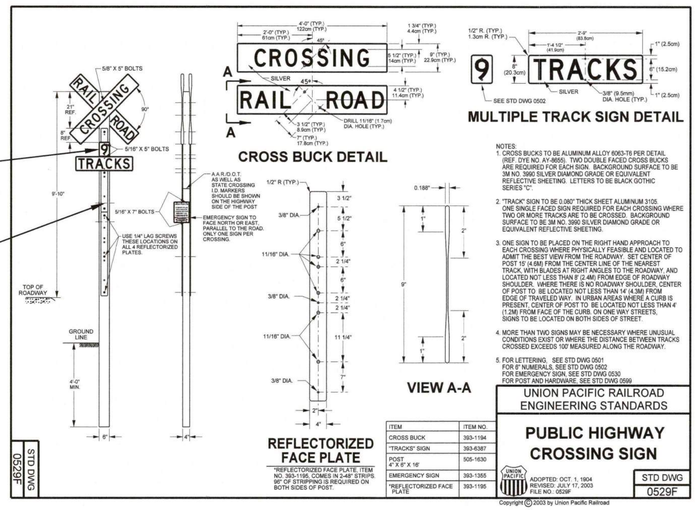
MOMENT OF INERTIA	65.60
SECTION MODULUS, HEAD	18.00
SECTION MODULUS, BASE	22.00
WEIGHT	114.70 LBS PER YARD

RAIL SECTION
115# HEAD HARDENED RAIL
SCALE: NTS

NOTE:

1. RAIL WITHIN AND EXTENDING 15TF BEYOND CROSSING SHALL BE REPLACED WITH 136# RE RAIL WITH NO JOINTS, INSTALLED ON NEW 10'-0" TIES. RAIL SHALL BE INSTALLED WITH PANDROL STYLE FASTENERS

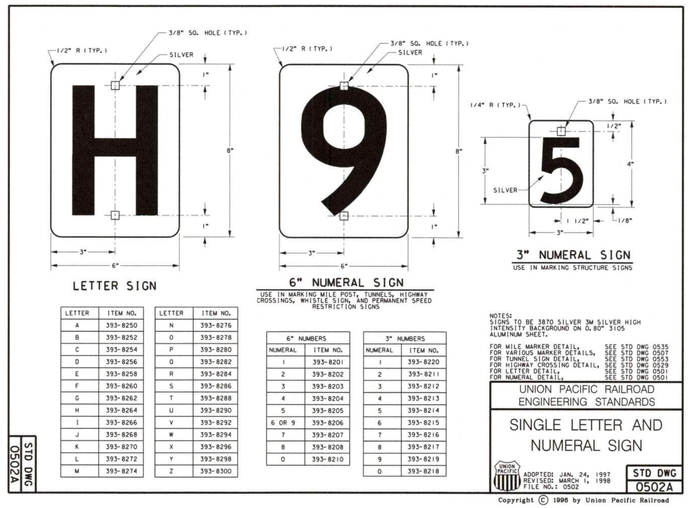
1 — ASPHALT RAILROAD CROSSING
NTS



ITEM	ITEM NO.
CROSS BUCK	393-1194
"TRACKS" SIGN	393-6387
POST 4" X 6" X 16'	505-1630
EMERGENCY SIGN	393-1355
"REFLECTORIZED FACE PLATE"	393-1195

"REFLECTORIZED FACE PLATE, ITEM NO. 393-1195, COMES IN 2-48" STRIPS. 90' OF STRIPPING IS REQUIRED ON BOTH SIDES OF POST.

2 — CROSSING SIGNAGE 1
NTS



LETTER	ITEM NO.
A	393-8250
B	393-8252
C	393-8254
D	393-8256
E	393-8258
F	393-8260
G	393-8262
H	393-8264
I	393-8266
J	393-8268
K	393-8270
L	393-8272
M	393-8274
N	393-8276
O	393-8278
P	393-8280
Q	393-8282
R	393-8284
S	393-8286
T	393-8288
U	393-8290
V	393-8292
W	393-8294
X	393-8296
Y	393-8298
Z	393-8300

6" NUMERALS	
NUMERAL	ITEM NO.
1	393-8201
2	393-8202
3	393-8203
4	393-8204
5	393-8205
6 OR 9	393-8206
7	393-8207
8	393-8208
0	393-8210

3" NUMERALS	
NUMERAL	ITEM NO.
1	393-8220
2	393-8211
3	393-8212
4	393-8213
5	393-8214
6	393-8215
7	393-8216
8	393-8217
9	393-8219
0	393-8218

3 — CROSSING SIGNAGE 2
NTS

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DATE: 2025-08-25

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THORNE ROAD
OFF DOCK CONTAINER YARD
CROSSING DETAILS

EK 4/3/2025 — CHECKED BY — DATE
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jtodd Apr 03, 2025

CONT/CONS:	071908	TOWNSHIP:	21N
M. ID:	101241.01	DAT-HRZ:	
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87
RANGE:	3E	SECTION:	34
VERT:		DRAWING SCALE:	AS NOTED

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C3.10
45 OF 105

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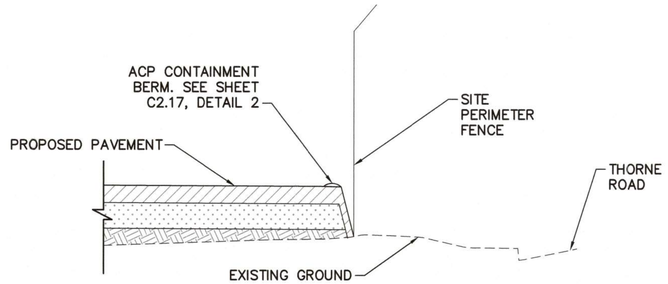
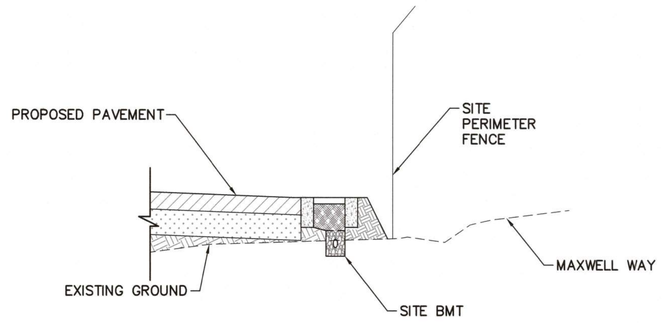
BINDING EDGE

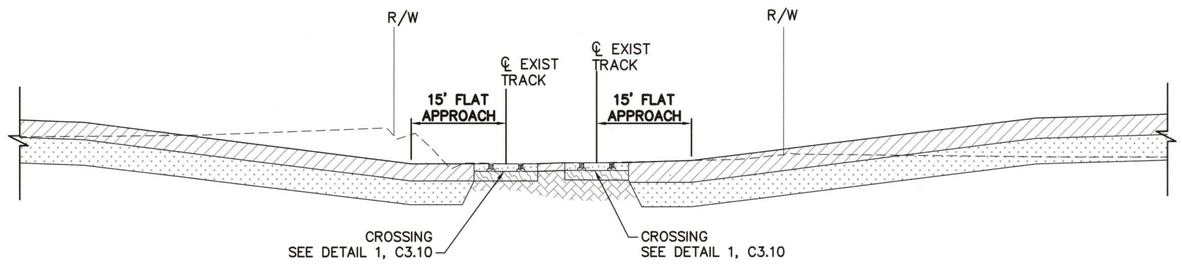
BINDING EDGE



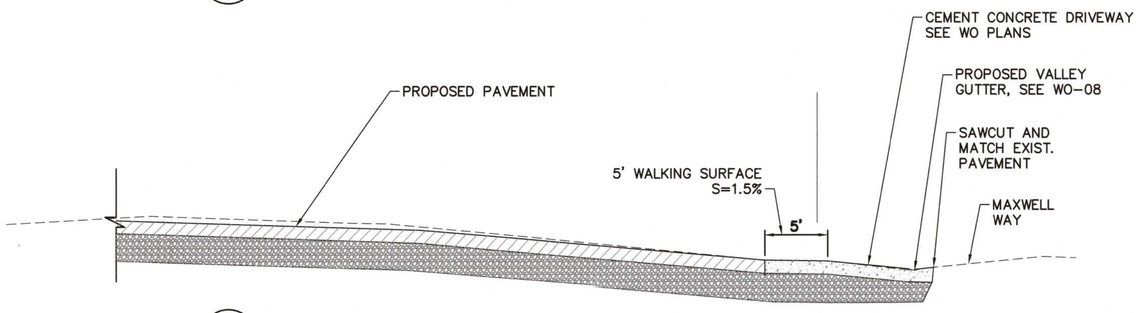
1 – **GRADING SECTION 1 - WITHOUT BMT**
SCALE: 1/4" = 1'–0" VERT, 1" = 1'–0" HOR



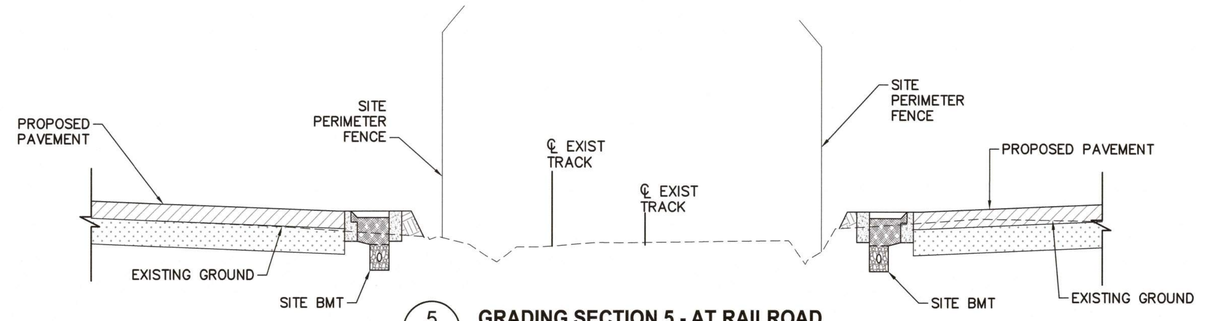
2 – **GRADING SECTION 2 - WITH BMT**
SCALE: 1/4" = 1'–0" VERT, 1" = 1'–0" HOR



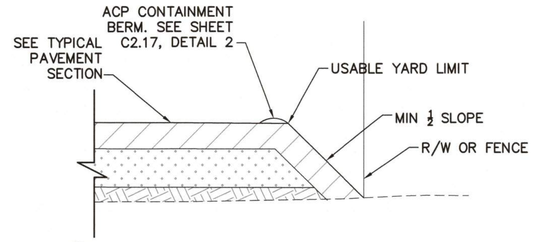
3 – **GRADING SECTION 3 - RAILROAD CROSSING**
SCALE: 1/4" = 1'–0" VERT, 1" = 1'–0" HOR



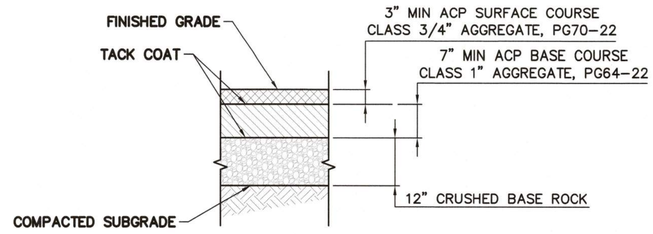
4 – **GRADING SECTION 4 - ENTRANCE**
SCALE: 1/4" = 1'–0" VERT, 1" = 1'–0" HOR



5 – **GRADING SECTION 5 - AT RAILROAD**
SCALE: 1/4" = 1'–0" VERT, 1" = 1'–0" HOR



6 – **PAVED SLOPE EDGE**
NTS



7 – **TYPICAL PAVEMENT SECTION**
NTS

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APPROVED:
DIRECTOR ENG. DATE 4/3/25

PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
GRADING & PAVING SECTION DETAILS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT–HRZ:	VERT:		DRAWING SCALE: AS NOTED
PARCEL: 72, 85, & 87			

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

6688
C3.11
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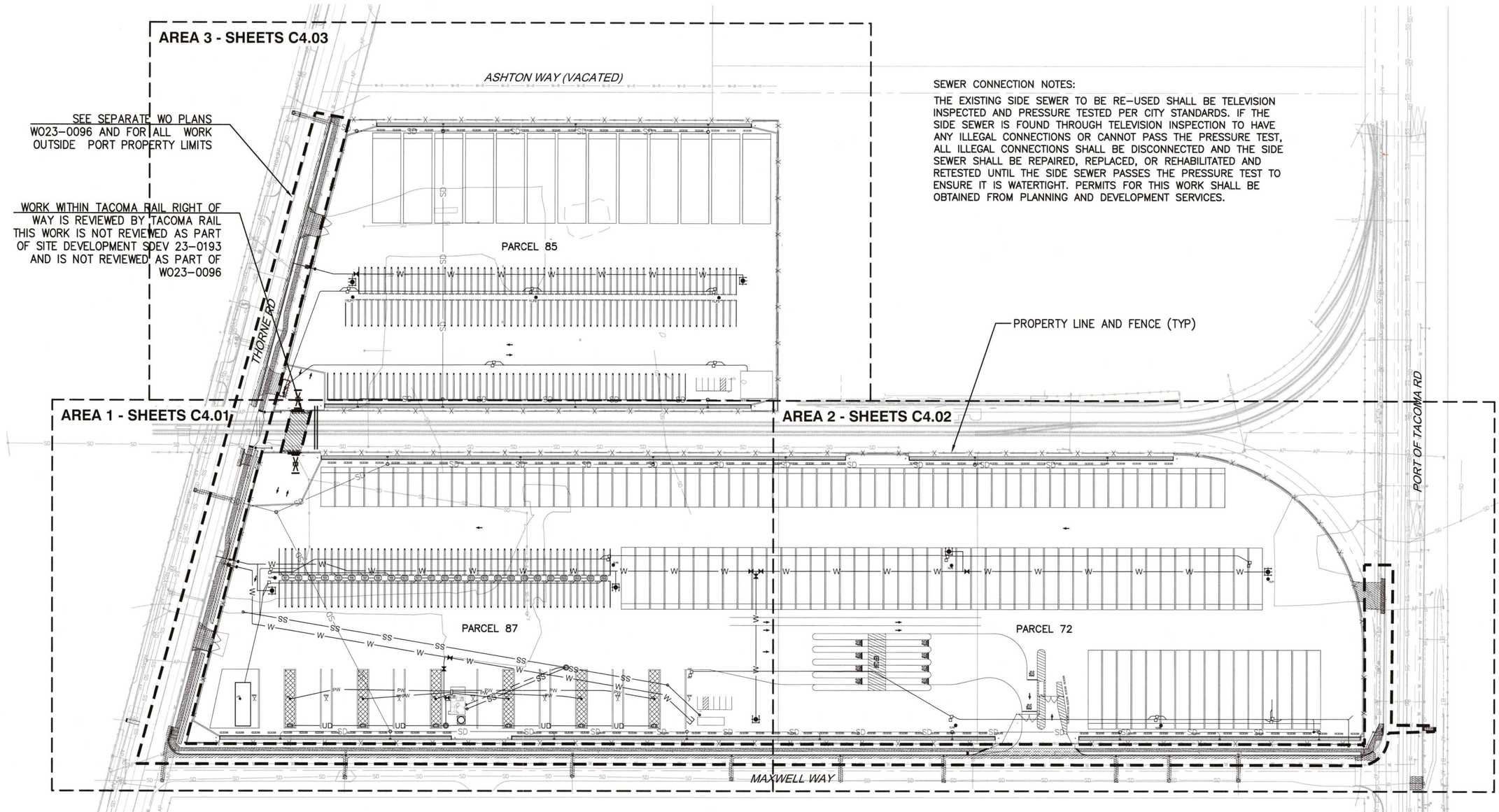


SEWER CONNECTION NOTES:

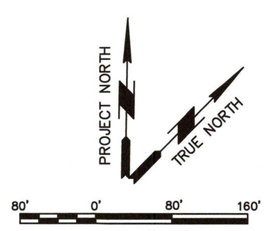
THE EXISTING SIDE SEWER TO BE RE-USED SHALL BE TELEVISION INSPECTED AND PRESSURE TESTED PER CITY STANDARDS. IF THE SIDE SEWER IS FOUND THROUGH TELEVISION INSPECTION TO HAVE ANY ILLEGAL CONNECTIONS OR CANNOT PASS THE PRESSURE TEST, ALL ILLEGAL CONNECTIONS SHALL BE DISCONNECTED AND THE SIDE SEWER SHALL BE REPAIRED, REPLACED, OR REHABILITATED AND RETESTED UNTIL THE SIDE SEWER PASSES THE PRESSURE TEST TO ENSURE IT IS WATERTIGHT. PERMITS FOR THIS WORK SHALL BE OBTAINED FROM PLANNING AND DEVELOPMENT SERVICES.

UTILITIES - OVERALL PLAN

SCALE: 1" = 80'

LEGEND:

- PROPERTY LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- BURIED POTABLE WATER LINE
- PROCESS WATER LINE
- BURIED GAS LINE
- DRAIN LINE
- WATER BACKFLOW DEVICE
- WATER METER
- SANITARY SEWER MANHOLE
- SUMP PUMP MANHOLE
- FIRE HYDRANT
- FIRE HYDRANT (WITH BOLLARD PROTECTION)
- WATER VALVE



SCALE: 1"=80'

ISSUED FOR CONSTRUCTION
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600 UNIVERSITY STREET SUITE# 810 SEATTLE, WA 98101 (206) 622-0222
moffatt & nichol

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PRINTED BY: jtodd Apr 03, 2025

THORNE ROAD
OFF DOCK CONTAINER YARD
UTILITIES

6688
C4.00
47 OF 105

CONT/CONS:	071908	TOWNSHIP:	21N	RANGE: 3E	SECTION: 34
M. ID:	101241.01	DAT-HRZ:		VERT:	PORT ADDRESS:
PHASE:	100% DESIGN	PARCEL:	72, 85, & 87	DRAWING SCALE:	AS NOTED

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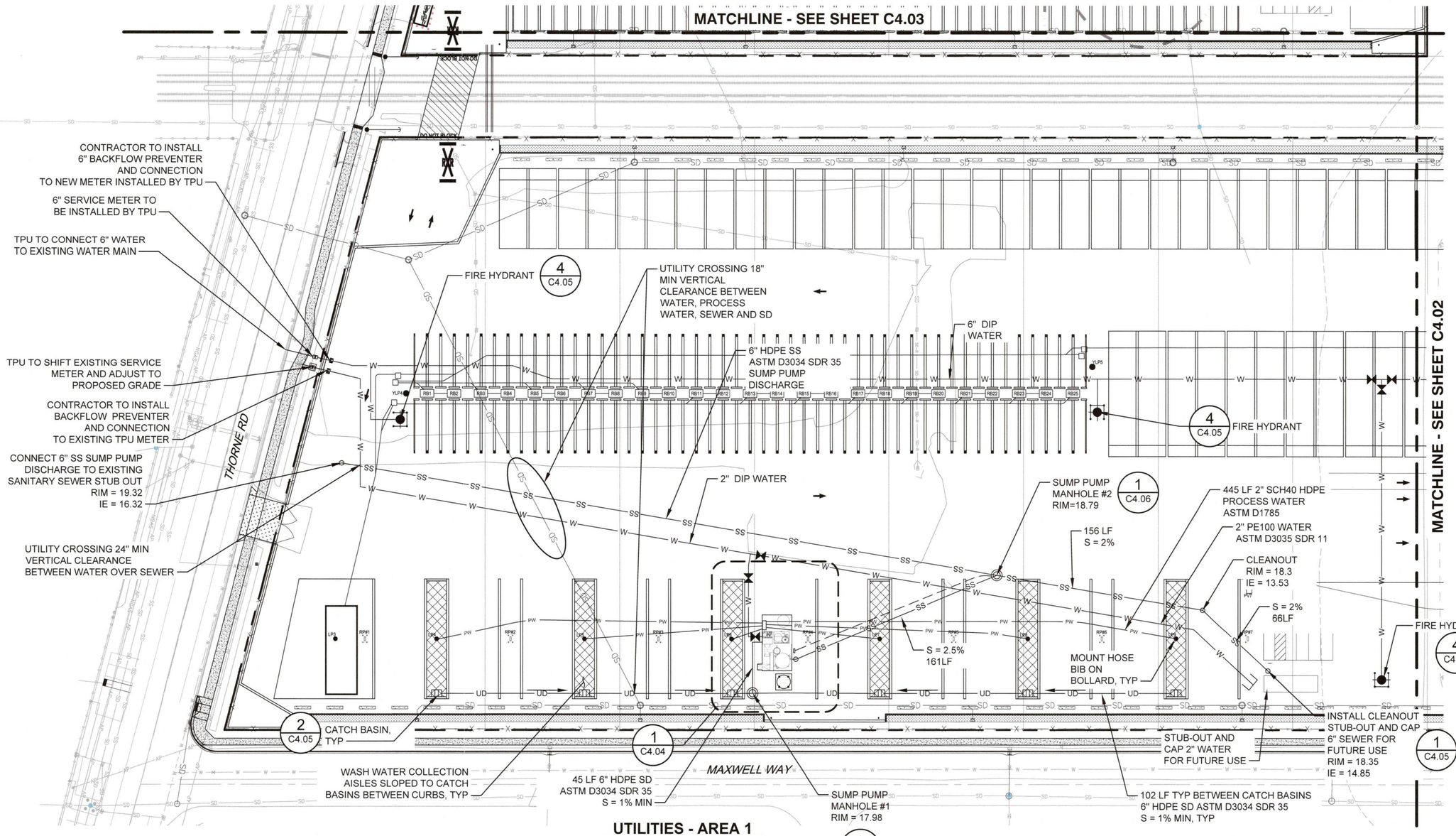


UTILITIES - AREA 1

SCALE: 1" = 40'

LEGEND:

- PROPERTY LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- BURIED POTABLE WATER LINE
- PROCESS WATER LINE
- DRAIN LINE
- WATER BACKFLOW DEVICE
- WATER METER
- SANITARY SEWER MANHOLE
- SUMP PUMP MANHOLE
- FIRE HYDRANT
- FIRE HYDRANT (WITH BOLLARD PROTECTION)
- WATER VALVE

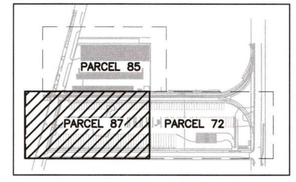
NOTES:

1. TYPICAL MINIMUM COVER IS 3' TO TOP OF PIPE.
2. WATERLINE JOINTS TO BE CONSTRUCTED WITH TWO FORMS OF CONSTRAINT, RESTRAINED WITH THRUST BLOCKS. SEE DETAIL 2 SHEET C4.04
3. ALL WATER PIPE SHALL BE INSTALLED OVER SANITARY SEWER OR STORMWATER PIPE WITH 2'-0" CLEAR BETWEEN THE PIPES.
4. ALL SANITARY SEWER PIPE SHALL BE 6" HDPE SS ASTM D3034 SDR 35 UNLESS OTHERWISE NOTED.

PROJECT NORTH / TRUE NORTH

40' 0' 40' 80'

SCALE: 1"=40'



KEY PLAN

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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Apr 03, 2025

PRINTED BY: jtodd
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
UTILITIES - AREA 1

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	DRAWING SCALE: AS NOTED
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87			

CONT/CONS: 071908
M. ID: 101241.01
PHASE: 100% DESIGN

6688
C4.01
48 OF 105

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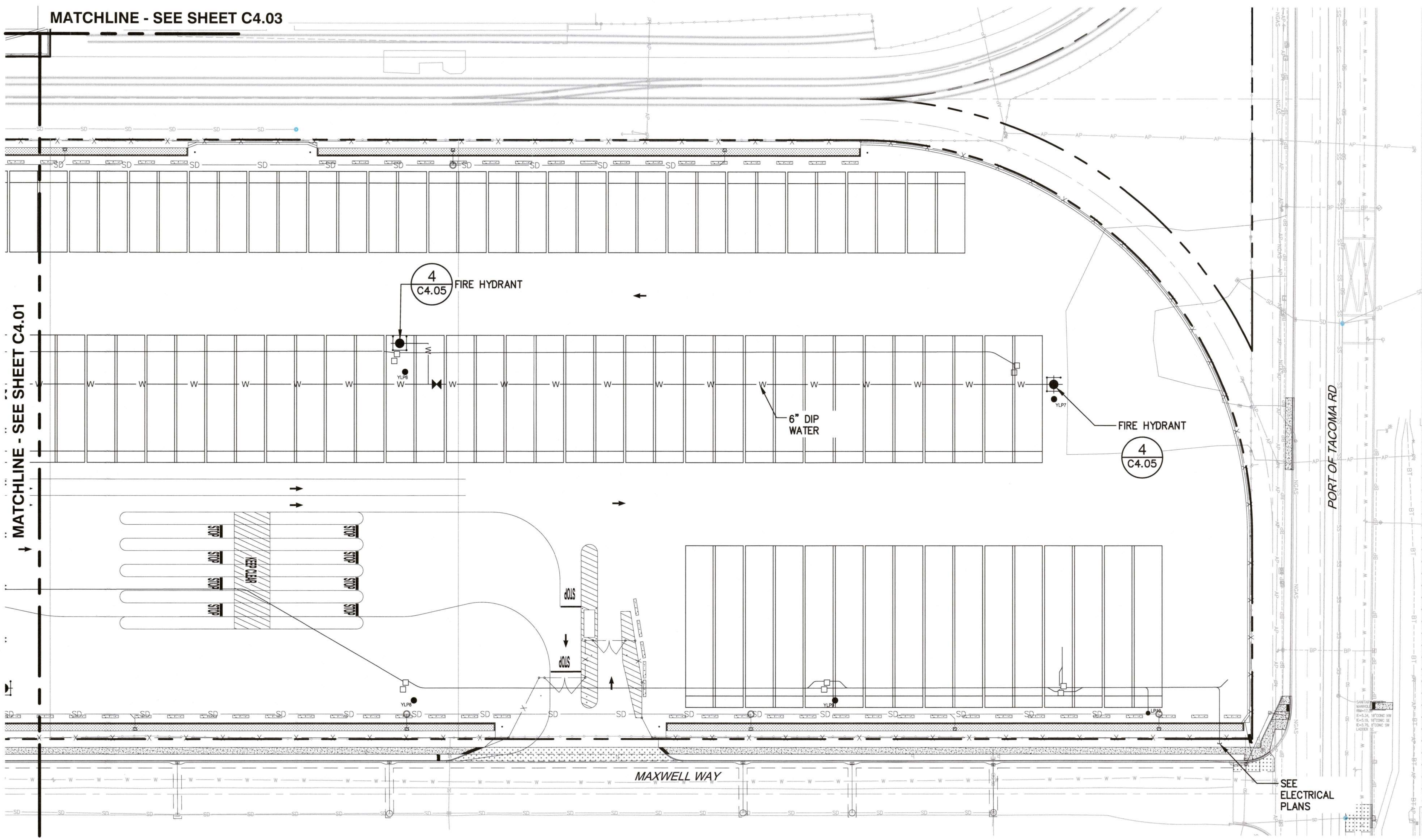
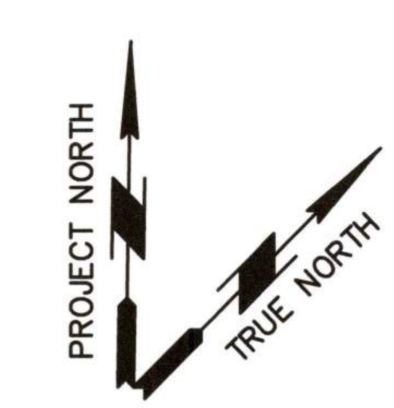


UTILITIES - AREA 2

SCALE: 1" = 40'

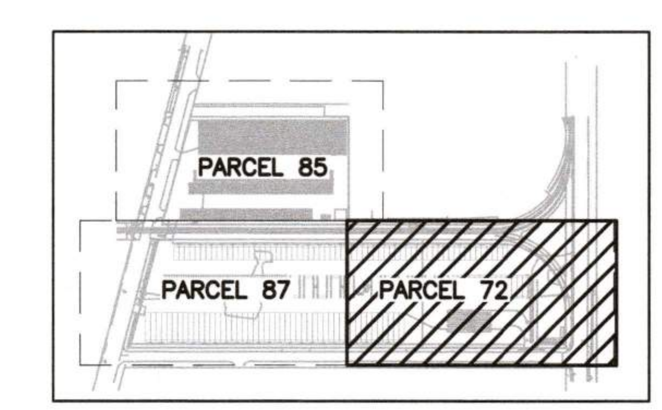
LEGEND:

- PROPERTY LINE
- SD — STORM DRAIN LINE
- SS — SANITARY SEWER LINE
- W — BURIED POTABLE WATER LINE
- SANITARY SEWER MANHOLE
- SUMP PUMP MANHOLE
- FIRE HYDRANT
- FIRE HYDRANT (WITH BOLLARD PROTECTION)
- WATER VALVE



40' 0' 40' 80'

SCALE: 1"=40'



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THORNE ROAD
OFF DOCK CONTAINER YARD
UTILITIES - AREA 2

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
DAT–HRZ:	VERT:	
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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C4.02
49 OF 105

CONT/CONS: 071908
M. ID: 101241.01
PHASE: 100% DESIGN

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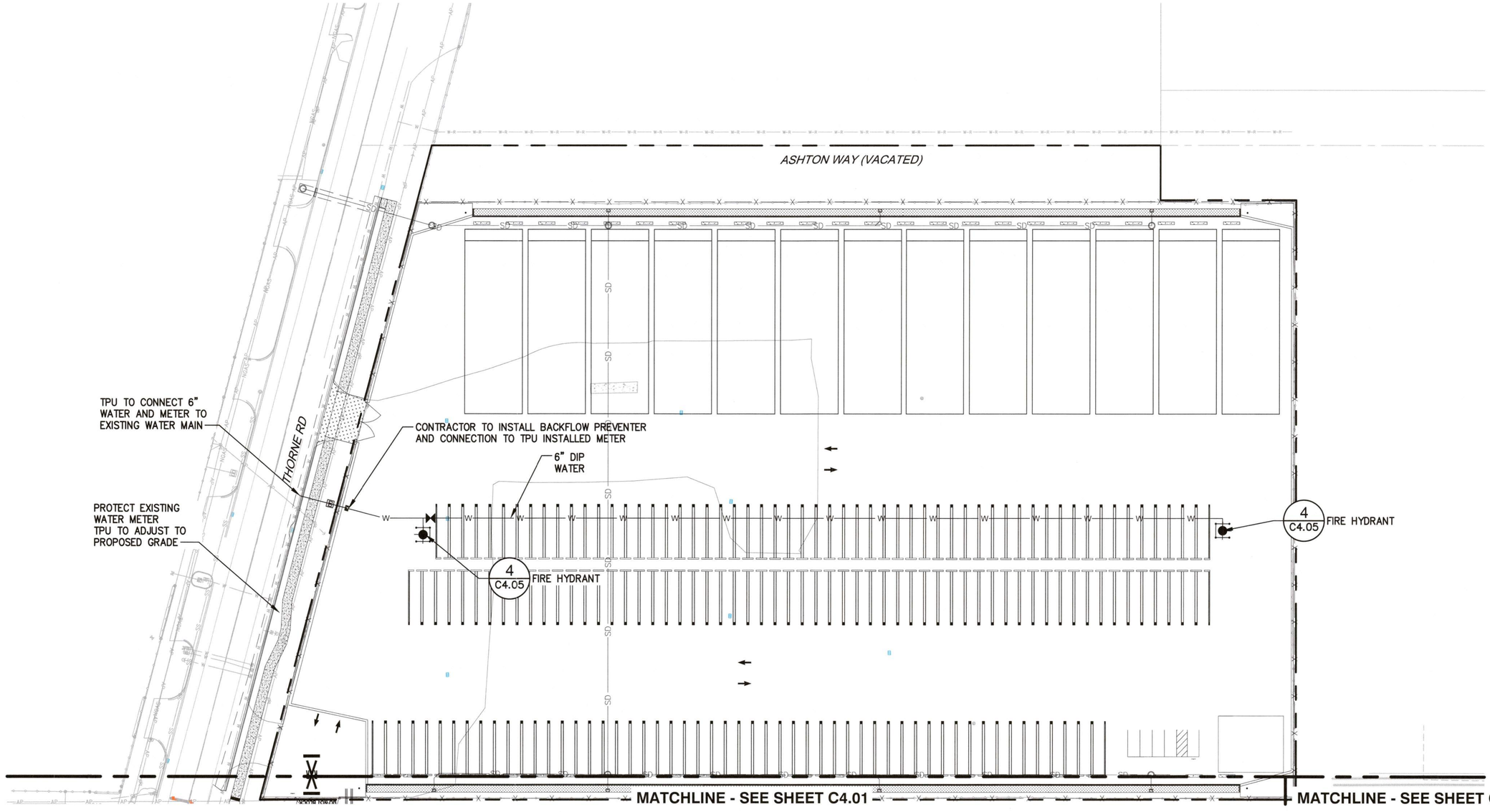


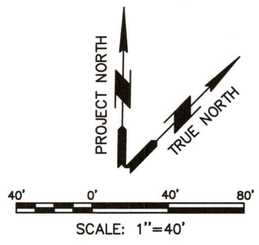
UTILITIES - AREA 3
SCALE: 1" = 40'

LEGEND:

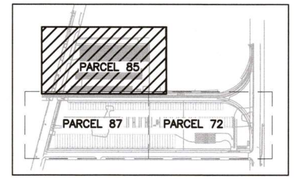
- PROPERTY LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- BURIED POTABLE WATER LINE
- WATER BACKFLOW DEVICE
- WATER METER
- FIRE HYDRANT WITH BOLLARD PROTECTION
- WATER VALVE

LEGEND:

PROPERTY LINE



SCALE: 1"=40'



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Apr 03, 2025

THORNE ROAD
OFF DOCK CONTAINER YARD
UTILITIES - AREA 3

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	PORT ADDRESS:
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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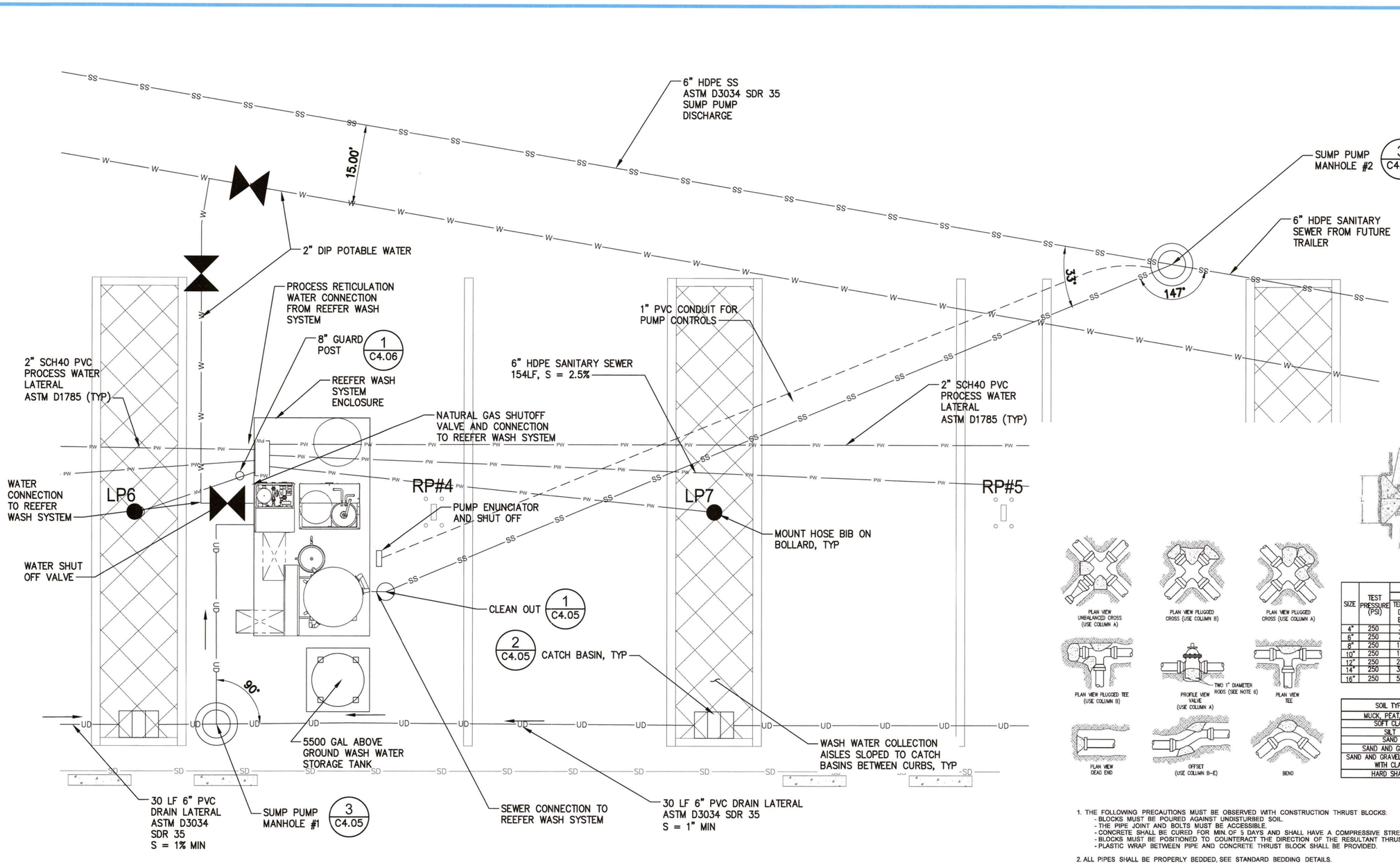
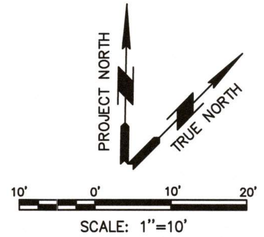
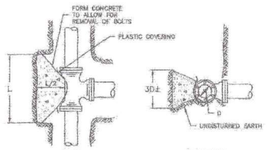


1 C4.01 **ENLARGED PLAN - REEFER WASH**
SCALE: 1" = 10'



SCALE: 1"=10'



SIZE	TEST PRESSURE (PSI)	THRUST AT FITTINGS IN POUNDS				
		A TEE AND DEAD ENDS	B 90° BEND	C 45° BEND	D 22.50° BEND	E 11.25° BEND
4"	250	3,140	4,440	2,405	1,225	615
6"	250	7,070	9,995	5,410	2,760	1,385
8"	250	12,565	17,770	9,620	4,905	2,465
10"	250	19,635	27,770	15,030	7,660	3,850
12"	250	28,275	39,985	21,640	11,030	5,545
14"	250	38,485	54,425	29,455	15,015	7,545
16"	250	50,265	71,085	38,470	19,615	9,855

TABLE 1

SOIL TYPE	SAFE BEARING LOAD(PSF)
MUCK, PEAT, ETC.	0
SOFT CLAY	1,000
SILT	1,500
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

1. THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WITH CONSTRUCTION THRUST BLOCKS:
   - BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
   - THE PIPE JOINT AND BOLTS MUST BE ACCESSIBLE.
   - CONCRETE SHALL BE CURED FOR MIN. OF 5 DAYS AND SHALL HAVE A COMPRESSIVE STRENGTH OF 2,000 LBS AT 28 DAYS.
   - BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.
   - PLASTIC WRAP BETWEEN PIPE AND CONCRETE THRUST BLOCK SHALL BE PROVIDED.
2. ALL PIPES SHALL BE PROPERLY BEDDED, SEE STANDARD BEDDING DETAILS.
3. TO DETERMINE THRUST AT PRESSURES OTHER THAN 200 PSI SHOWN, MULTIPLY THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE BY 100.

   EXAMPLE: THRUST ON A 12", 90DEGREE BEND AT 125 PSI
   19,500 x 125 / 100 = 24,375 LBS.
4. TO DETERMINE THE VOLUME OF THE THRUST BLOCK:

   EXAMPLE: (150 LB/C.F. WEIGHT OF CONCRETE)
   24,375 / 150 LB/C.F. = 162.50 C.F.
   162.50 C.F. / 27 C.Y./C.F. = 6.02 C.Y. OF CONCRETE
5. TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (S.F.) SEE TABLE 1, BEARING VALUE OF SOIL:

   EXAMPLE: 24,375 LBS / 2,000 LBS/S.F. OF AREA
6. PROVIDE TWO 1-INCH MINIMUM DIAMETER RODS ON VALVES UP THROUGH 10-INCH DIAMETER. VALVES LARGER THAN 10-INCHES REQUIRE SPECIAL TIE ROD DESIGN.

THRUST BLOCK DETAIL

2 C4.02 **THRUST BLOCK DETAILS**

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Apr 03, 2025

APPROVED:
Director of Engineering
PRINTED BY: jtodd Apr 03, 2025 PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
ENLARGED PLAN

6688
C4.04
51 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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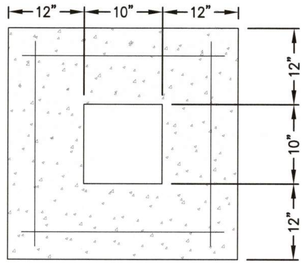
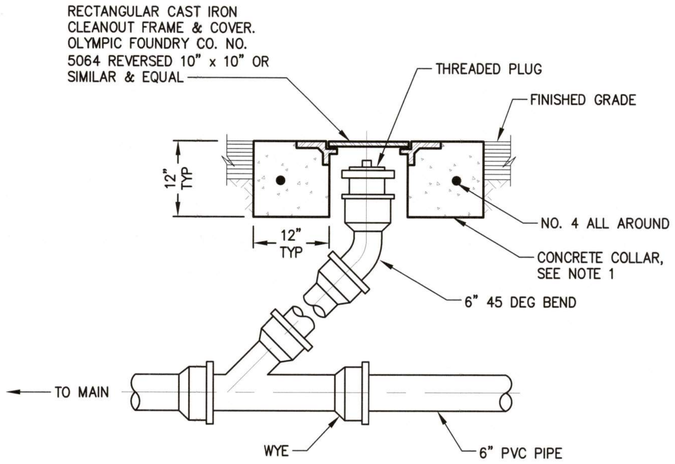
BINDING EDGE

NOTES

1. CATCH BASIN STRUCTURES, CONCRETE COLLARS, FRAMES, COVERS AND GRATES SHALL BE DESIGNED, BY THE CONTRACTOR, FOR LIVE LOADING CRITERIA NOTED ON DRAWING G1.03.



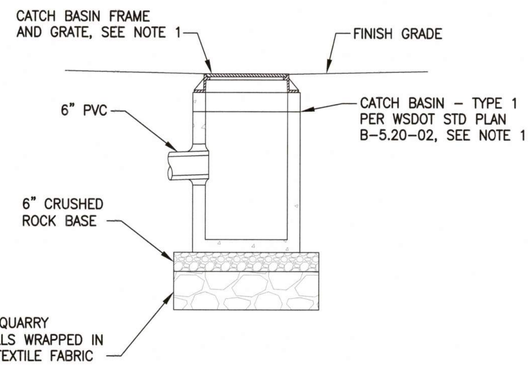
PLAN



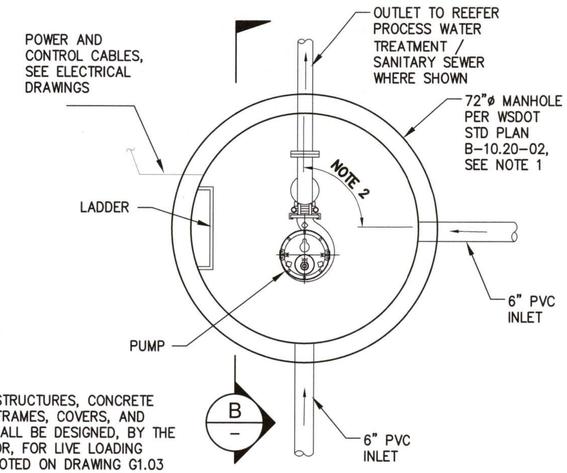
ELEVATION

NOTE:
1. CLEANOUT SHALL BE DESIGNED FOR TOP PICK LOADING.

1 CLEANOUT DETAIL
SCALE: NTS



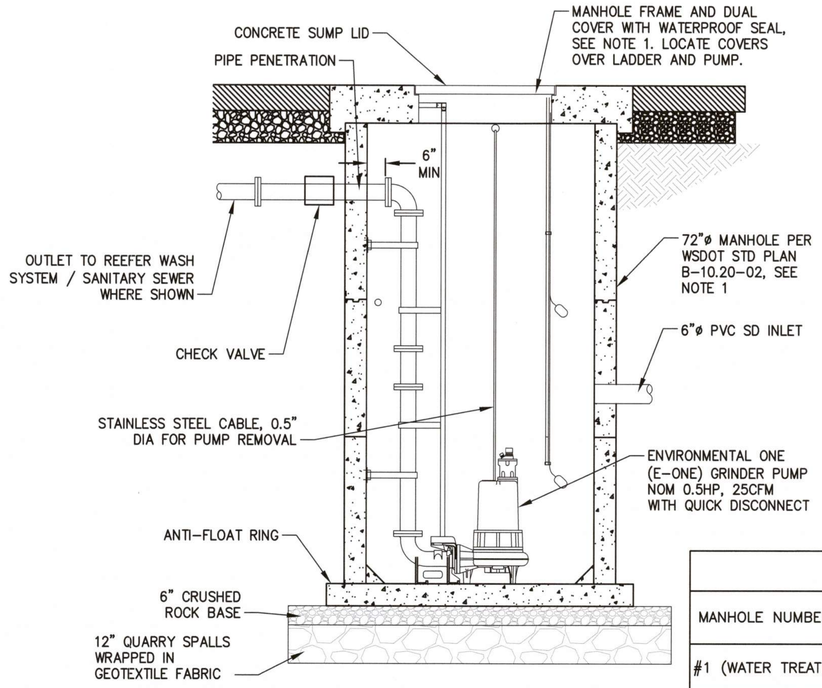
2 CATCH BASIN DETAIL
SCALE: NTS



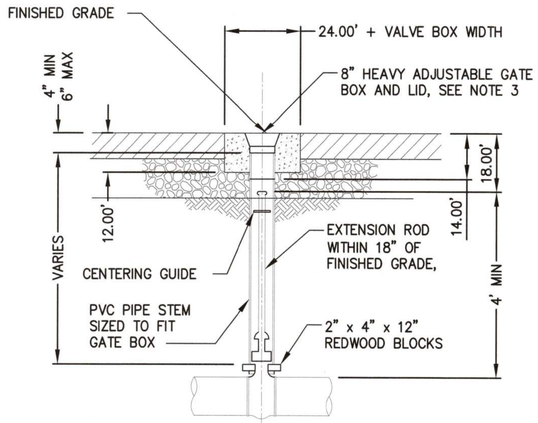
NOTES

1. MANHOLE STRUCTURES, CONCRETE COLLARS, FRAMES, COVERS, AND GRATES SHALL BE DESIGNED, BY THE CONTRACTOR, FOR LIVE LOADING CRITERIA NOTED ON DRAWING G1.03
2. ORIENT INLET AND DISCHARGE PIPES AS SHOWN IN PLANS.

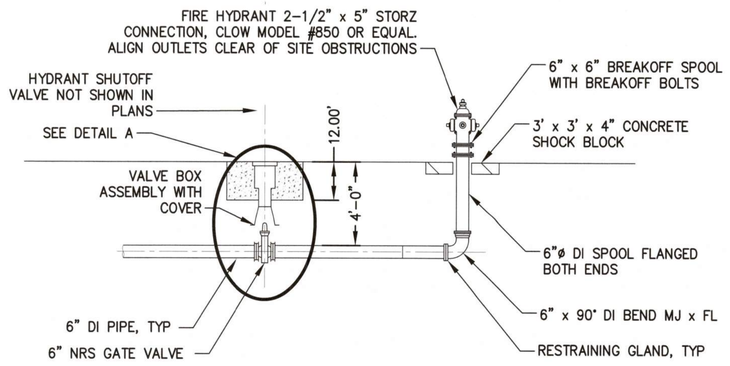
3 SUMP PUMP MANHOLE - DETAIL
SCALE: NTS



B SECTION
NOT TO SCALE



NOTES:
1. COAT ENTIRE EXTENSION ROD ASSEMBLY WITH NO–OX–ID A SPECIAL COMPOUND.
2. DIAMETER OF CENTERING GUIDE TO BE 1/2" SMALLER THAN INSIDE DIAMETER OF GATE BOX OR PIPE STEM.
3. GATE BOX AND LID SHALL BE DESIGNED FOR LIVE LOADING NOTED ON SHEET G1.03
4. GATE BOX LID SHALL BE MARKED "WATER". USE 8" GATE BOX FOR 12" WATER AND SMALLER.
5. SEE HYDRANT PROTECTION DETAILS ON SHEET 4.06 FOR BOLLARD AND CAGE PROTECTION OF HYDRANTS



4 FIRE HYDRANT
SCALE: NTS

SUMP PUMP MANHOLE

MANHOLE NUMBER (LOCATION)	INVERT IN	DISCHARGE INVERT	RIM
#1 (WATER TREATMENT)	12.92 (E AND W)	14.05	17.98
#2 (SITE DISCHARGE)	10.41 (E) 11.35 (S)	15.19	18.79

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THORNE ROAD
THORNE ROAD
DETAILS - MISCELLANEOUS

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	DRAWING SCALE: AS NOTED
DAT–HRZ:	VERT:		
PARCEL: 72, 85, & 87			

CONT/CONS: 071908
M. ID: 101241.01
PHASE: 100% DESIGN

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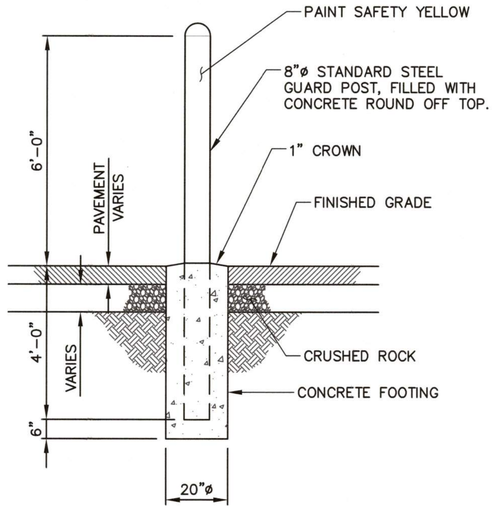
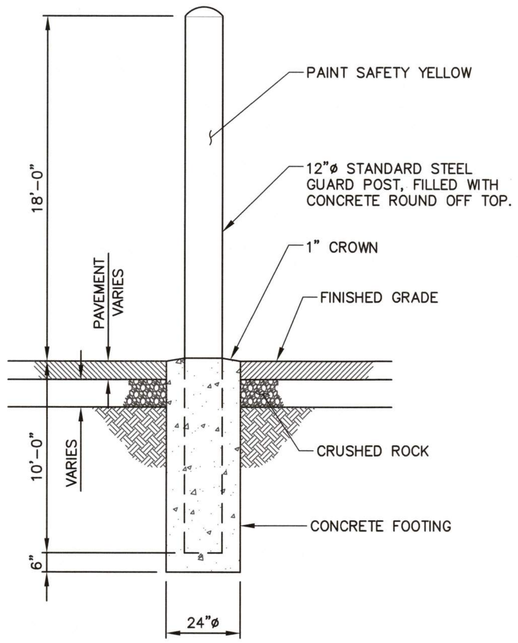
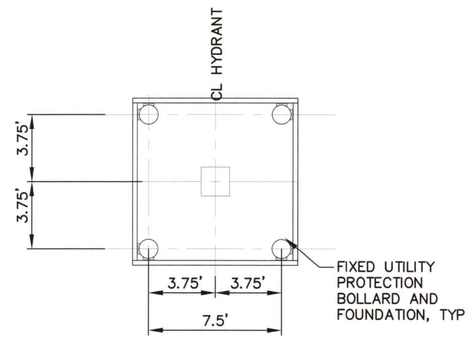


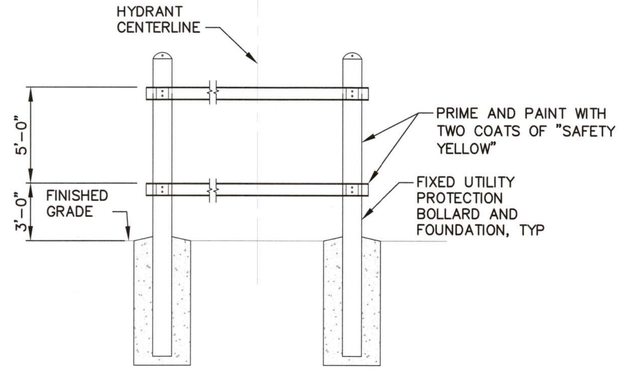
1 — **DETAIL - 8" BOLLARD**
SCALE: 1/2"=1'-0"



3 — **DETAIL - 12" BOLLARD**
SCALE: 1/2"=1'-0"

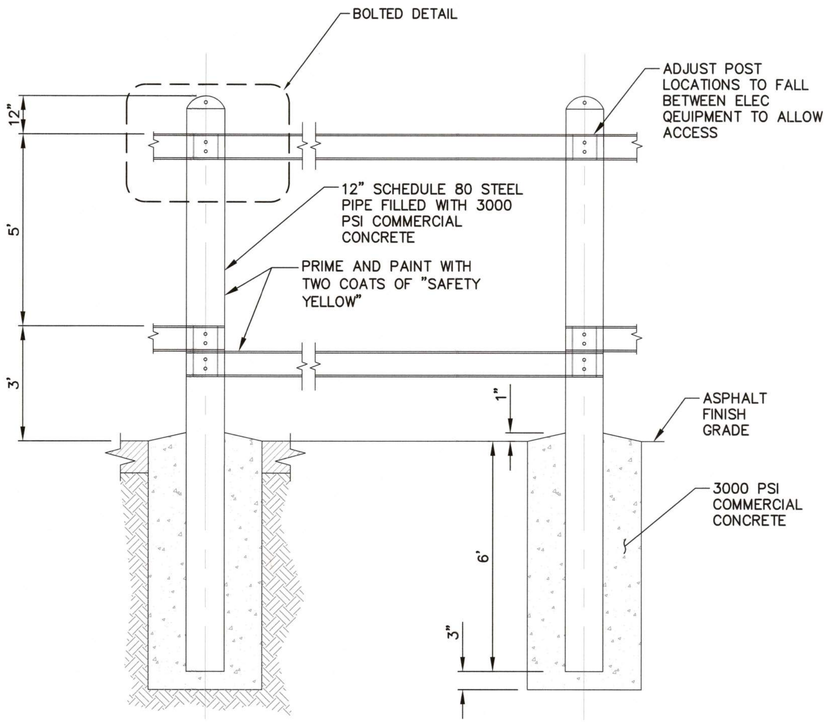


PLAN

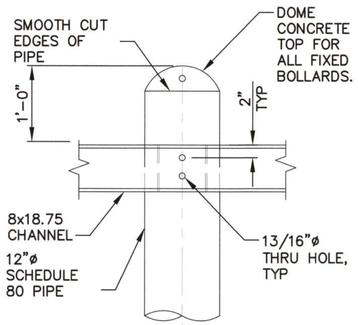


ELEVATION

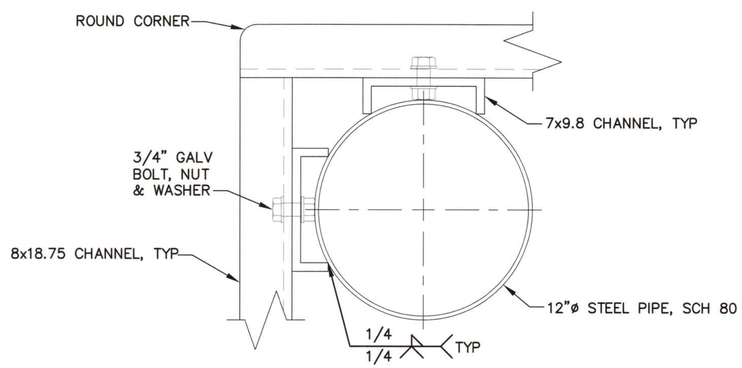
5 — **FIRE HYDRANT BOLLARD**
NOT TO SCALE



2 — **BOLLARD PROTECTION**
NOT TO SCALE



4 — **BOLTED DETAIL**
NOT TO SCALE



6 — **GUARD RAIL DETAIL**
NOT TO SCALE

2' 0' 2' 4'
SCALE: 1"=2'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BINDING EDGE

PORT OF TACOMA FILE: Q:\SEA\10284-02\CADD_Active_SheetSet\10284O2-C04.06

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841
moffatt & nichol
600 UNIVERSITY STREET SUITE# 810 SEATTLE, WA 98101 (206) 622-0222

MARK:	REVISION:	BY:	APPR:	DATE:

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
jtodd Apr 03, 2025
DATE
TACOMA, WA 98401-1837

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS - REEFER WASH DOWN

6688
C4.06
53 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:ONE SITCUM PLAZA

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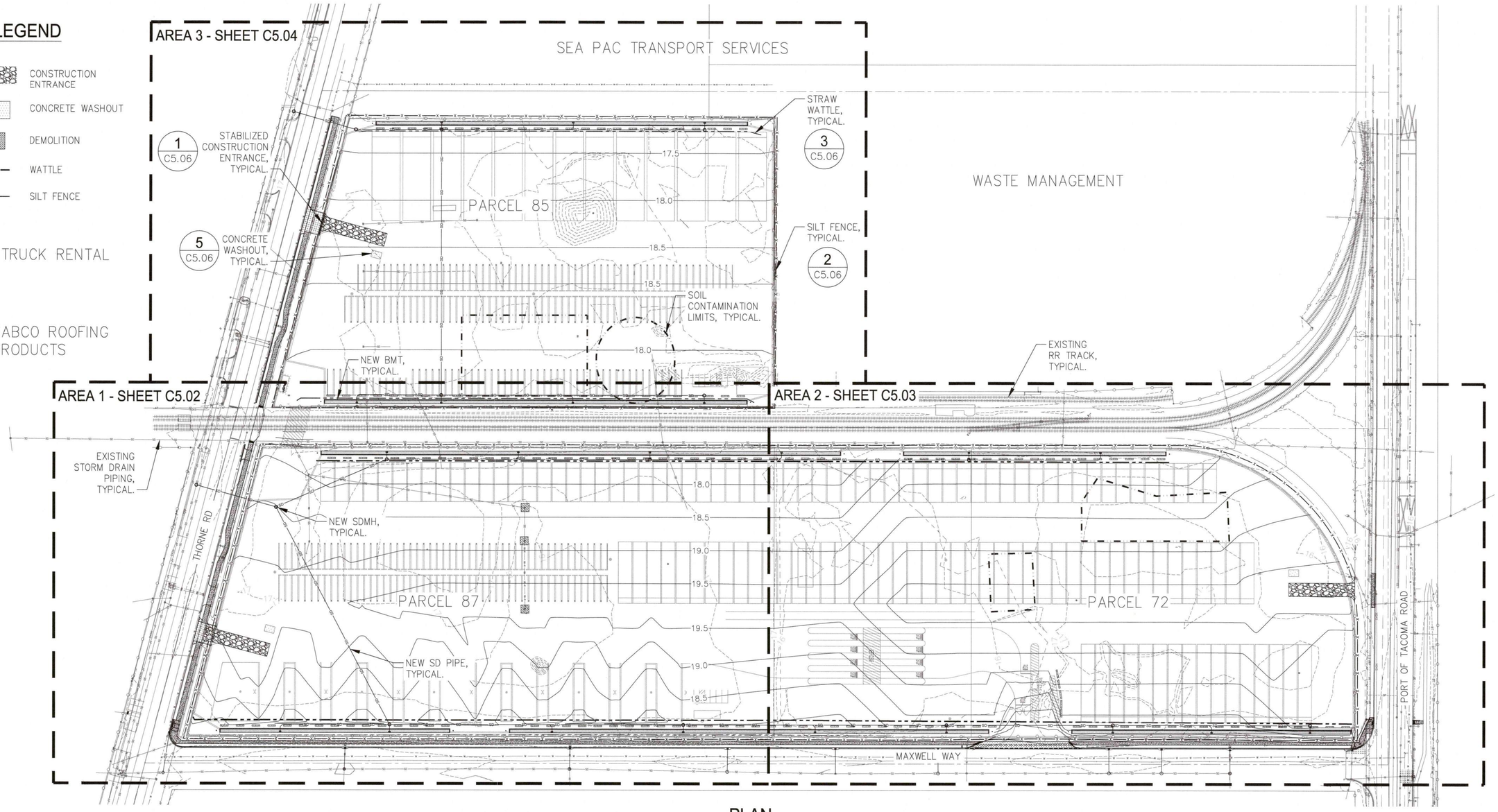
BINDING EDGE

LEGEND

- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- DEMOLITION
- WATTLE
- SILT FENCE



PLAN

SCALE: 1" = 80'

NOTES:
1. SEE SHEET C5.08 FOR THE OVERALL STORMWATER SITE PLAN AND KEY MAP.
2. SEE GENERAL AND TESC NOTES ON SHEETS C5.02 THROUGH C5.06.

LEGAL DESCRIPTIONS:

THE LAND IN THE COUNTY OF PIERCE, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A; T.P.N. 6965000350; 1451 THORNE ROAD

LOTS 9 THROUGH 15, BLOCK 9, PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT FIRST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 18 OF PLATS, PAGE 8, WHICH IS A CORRECTION OF PLAT RECORDED IN VOLUME 14 OF PLATS, PAGE 71, RECORDS OF PIERCE COUNTY AUDITOR.

TOGETHER WITH THAT PORTION OF VACATED ASHTON WAY, ATTACHED THERETO AND ABUTTING THEREON BY OPERATION OF LAW, AS VACATED BY THE CITY IF TACOMA ORDINANCE NO. 21416 AND RECORDED UNDER UNDER RECORDING NUMBER 9302230756, EXCEPT ANY PORTION OF ASHTON WAY ABUTTING SAID LOT 9.

PARCEL B; T.P.N. 6965000381; 1702 THORNE ROAD

LOTS 1 THROUGH 16, BLOCK 11, PORT OF TACOMA INDUSTRIAL DEVELOPMENT FIRST ADDITION TO THE CITY OF TACOMA, PIERCE COUNTY, WASHINGTON, ACCORDING TO THE PLAT RECORDED IN BOOK 14 OF PLATS, PAGES 71–73, WHICH PLAT WAS CORRECTED BY PLAT RECORDED IN BOOK 18 OF PLATS PAGE 8, IN PIERCE COUNTY, WASHINGTON.

80'–0" 0'–0" 80'–0" 160'–0"

SCALE: 1"=80'–0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

APPROVED:

DIRECTOR ENG. DATE

	CHECKED BY	DATE
–	B. FUENTES	
PRINTED BY:	PROJ. ENGR	DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC SITE PLAN AND KEY MAP

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	PORT ADDRESS:ONE SITCUM PLAZA
DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933		TACOMA, WA 98401–1837
PARCEL:	DRAWING SCALE: AS NOTED		

6688
C5.01
54 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

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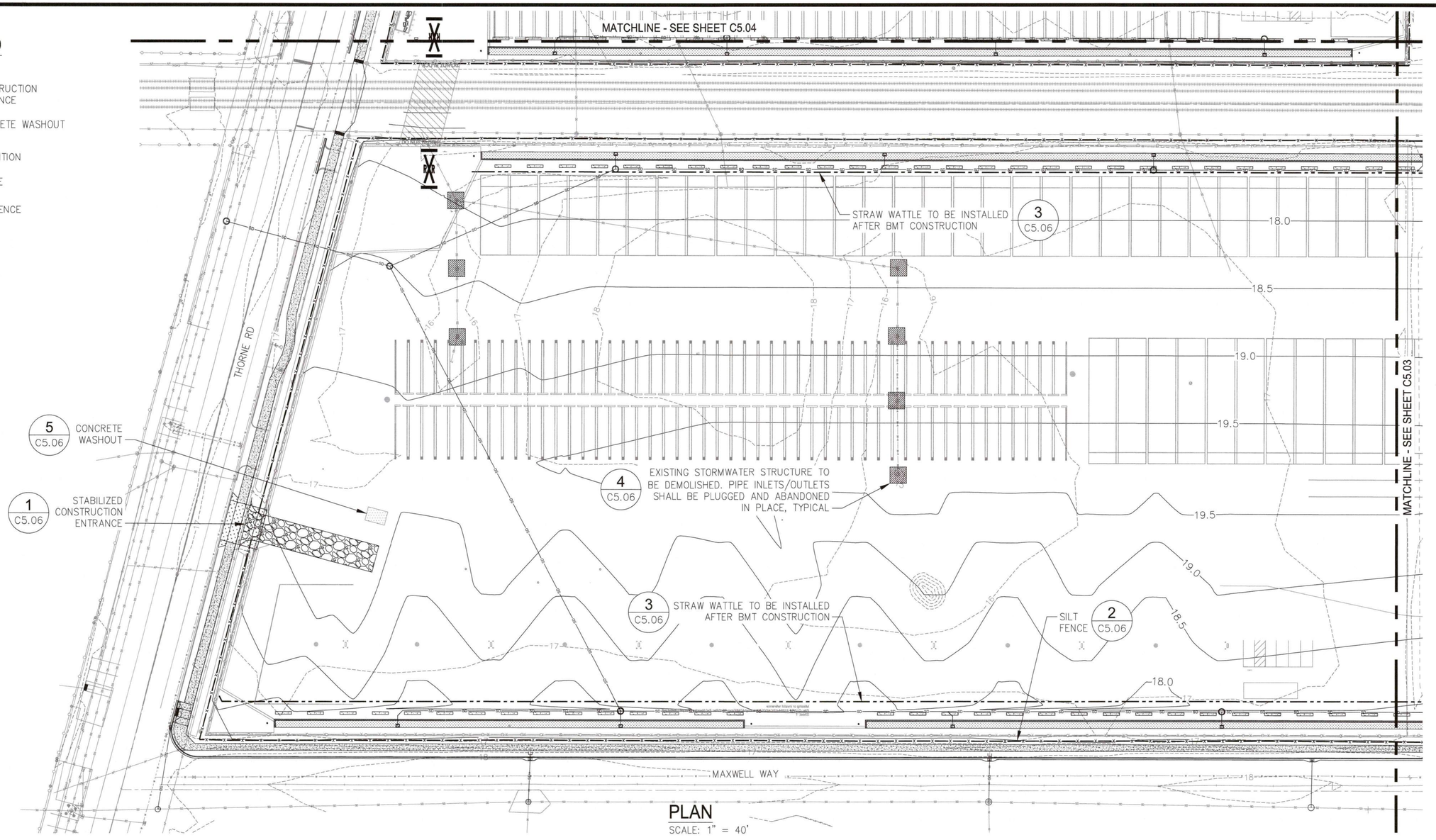
PORT OF TACOMA FILE: C:\bms\kjce-pw\d0130409\1028402-C5.01 (TESC PLAN AND KEY MAP)

BINDING EDGE

LEGEND

- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- DEMOLITION
- WATTLE
- SILT FENCE



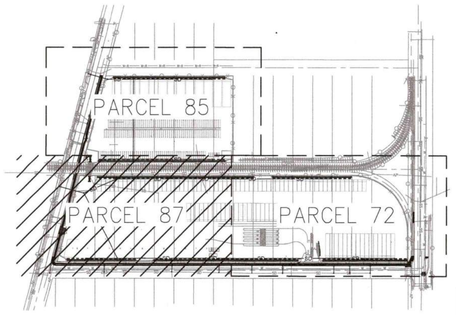
PLAN
SCALE: 1" = 40'

GENERAL NOTES:

1. ALL PROPOSED TESC FACILITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL CONDUCT ALL EROSION AND SEDIMENT CONTROL PRACTICES IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION SWPPP.
2. THE IMPLEMENTATION OF TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, UPGRADING, AND REMOVAL OF TESC FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETE AND APPROVED.
3. TESC PLAN SHOWN HEREON IS CONSIDERED ONLY AS A BASELINE FOR CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING TESC MEASURES AS NECESSARY TO COMPLY WITH THE ECOLOGY CONSTRUCTION STORMWATER PERMIT AND LOCAL, STATE, AND FEDERAL REGULATIONS.
4. FROM OCTOBER 1 TO APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM MAY 1 TO SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS.

TESC NOTES:

1. AT NO TIME SHALL MORE THAN 1/3 FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN THE STORMWATER INLET PROTECTION.
2. STABILIZATION SHALL BE PROVIDED FOR STOCKPILE(S) AND UPGRADED AS NECESSARY TO MINIMIZE SEDIMENT LOSSES, AS SHOWN IN DETAIL 6 ON SHEET C5.06.
3. STOCKPILE(S) SHALL BE SURROUNDED BY ECOLOGY BLOCKS, BARRICADES, HIGH VISIBILITY FENCING AND/OR OTHER MEASURES TO PROVIDE FOR PUBLIC, OWNER, AND CONTRACTOR SAFETY.
4. TRACK OUT FROM THE STOCKPILE SHALL BE MINIMIZED, AND PRIOR TO FINAL CLOSEOUT, STOCKPILE AREA SHALL BE CLEARED OF ACCUMULATED OR STRAY SEDIMENT.
5. CONTRACTOR SHALL PERFORM ALL TESC MEASURES AS NECESSARY TO ENSURE NO AGGREGATE, PAVEMENT, SOIL, OR OTHER MATERIALS ARE TRACKED OUT OF THE WORK AREA.
6. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY COLLECTION AND CONVEYANCE INFRASTRUCTURE TO COLLECT ALL CONSTRUCTION STORMWATER AND DEWATERING WATER, TO MANAGE DISCHARGES TO MEET THE REQUIREMENTS OF THE DEPARTMENT OF ECOLOGY'S (ECOLOGY'S) CONSTRUCTIONS STORMWATER GENERAL PERMIT (CSWGP), AND SAFELY DISCHARGE THE WATER TO THE EXISTING CITY STORM SYSTEM.
7. CONTRACTOR SHALL INSTALL STORMWATER INLET PROTECTION FOR ALL INLETS WITHIN THE WORK LIMITS AND WITHIN 100' OF THE WORK LIMITS AND ALL HAUL ROUTES. SEE BMP C220: STORMWATER SYSTEM INLET PROTECTION IN 2021 CITY OF TACOMA SWMM FOR APPROPRIATE INLET PROTECTION. INLET PROTECTION SHALL BE MAINTAINED UNTIL THE INLET IS DEMOLISHED AS SHOWN HEREON OR UNTIL ALL CONSTRUCTION IS COMPLETE AND APPROVED, AS APPLICABLE.
8. THE SHEET OR OVERLAND FLOW PATH LENGTH UPSTREAM OF A SILT FENCE SHALL NOT EXCEED 100 LF. CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY DURING CONSTRUCTION TO CONTROL THE TRANSPORT OF WATER AND SEDIMENT OUT OF THE PROJECT SITE.
9. ALL TESC FACILITIES SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION ACTIVITIES AND IN SUCH A MANNER AS TO ENSURE THAT CONSTRUCTION STORMWATER WHICH DOES NOT MEET THE REQUIREMENTS OF ECOLOGY'S CSWGP DOES NOT ENTER THE EXISTING DRAINAGE SYSTEM OR ADJACENT WATER BODY, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
10. TESC FACILITIES SHALL BE UPGRADED AS NECESSARY TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.



KEY PLAN
NOT TO SCALE

40'-0" 0'-0" 40'-0" 80'-0"
SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — 48520 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

APPROVED:
DIRECTOR ENG.

	CHECKED BY	DATE
	B. FUENTES	
DATE	PROJ. ENGR	DATE

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

PRINTED BY:

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC - ENLARGED PLAN 01

6688
C5.02
55 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34
M. ID: 10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100%	PARCEL:	DRAWING SCALE: AS NOTED	

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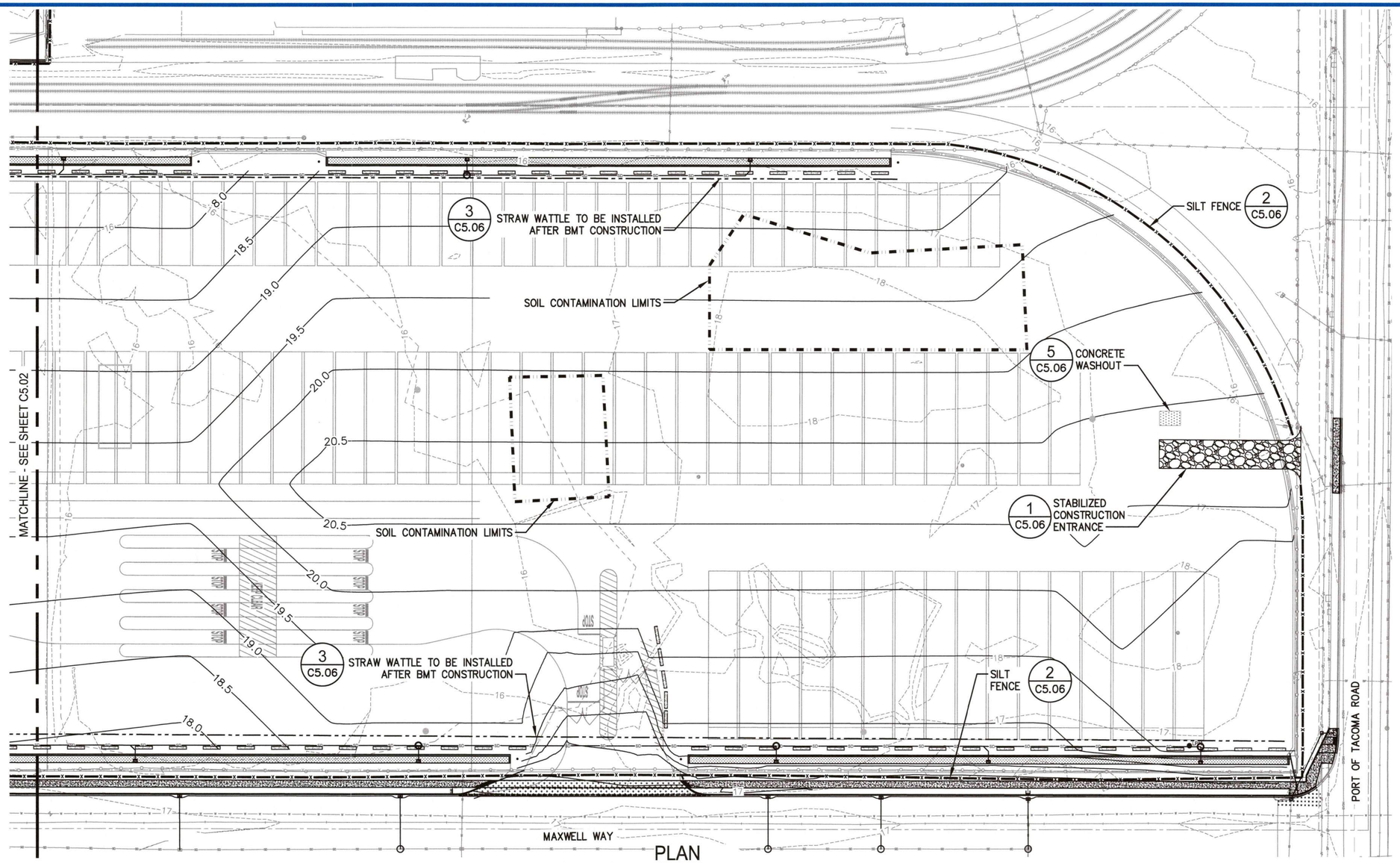
BINDING EDGE

LEGEND

- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- WATTLE
- SILT FENCE



PLAN
SCALE: 1" = 40'

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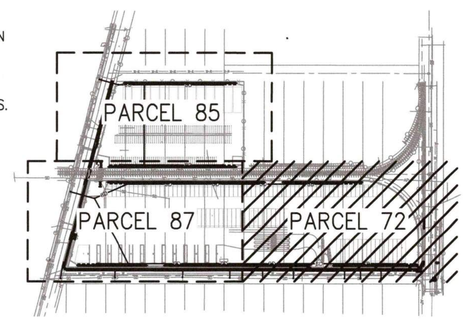
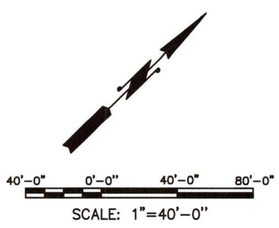


KEY PLAN
NOT TO SCALE



SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — 04.02.25

APPROVED:
DIRECTOR ENG. DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC - ENLARGED PLAN 02

CHECKED BY	DATE	–	
B. FUENTES	04.02.25		
PROJ. ENGR	DATE		
PRINTED BY:			
PORT ADDRESS:	ONE SITCUM PLAZA		
	TACOMA, WA 98401-1837		

6688
C5.03
56 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100%	PARCEL:	DRAWING SCALE: AS NOTED

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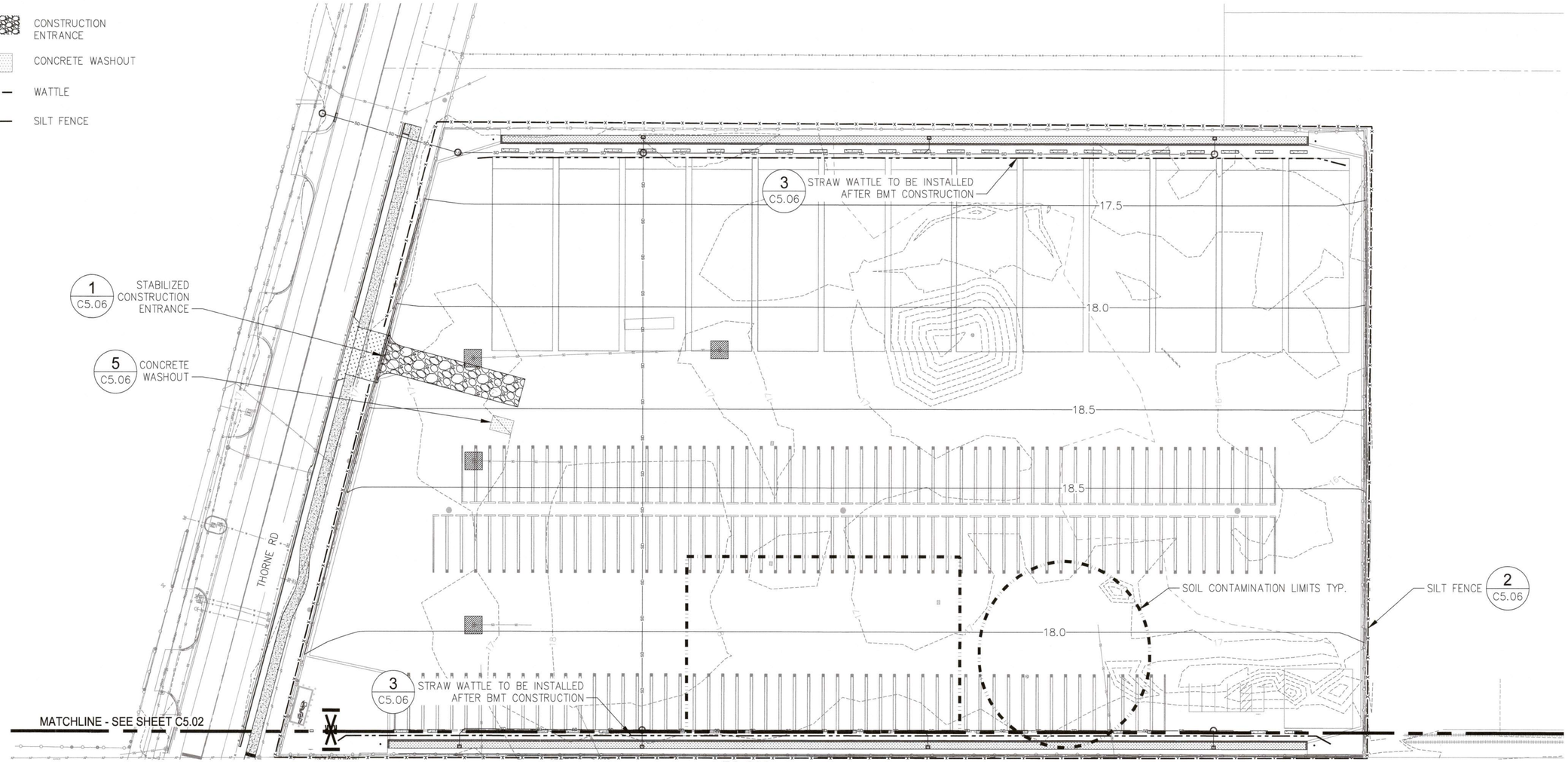
BINDING EDGE

LEGEND

- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- WATTLE
- SILT FENCE



PLAN
SCALE: 1" = 40'

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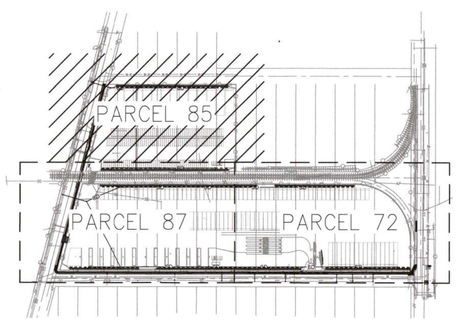
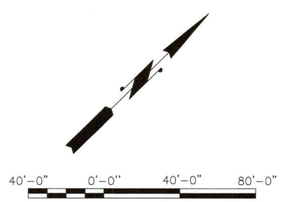


KEY PLAN
NOT TO SCALE



SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — 6688 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

APPROVED:
DIRECTOR ENG.

PRINTED BY: –
CHECKED BY: B. FUENTES
PROJ. ENGR
DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC - ENLARGED PLAN 03

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22.1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6688
C5.04
57 OF 105

CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

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PORT OF TACOMA FILE: C:\bmslkjce-pw\d0130409\1028402-C5.04 (TESC ENLARGED PLAN 03)

BINDING EDGE

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN NOTES:

CONSTRUCTION SWPP SHALL BE PREPARED BY THE PORT AND PROVIDED TO THE CONTRACTOR. THE FOLLOWING NOTES ARE BASED ON THE APPLICABLE 13 ELEMENTS FOR CONSTRUCTION STORMWATER (SWMM) POLLUTION PREVENTION AS PRESENTED IN CITY OF TACOMA STORMWATER MANAGEMENT MANUAL JULY 2021 EDITION SECTION 1.4.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY EROSION AND SEDIMENT CONTROLS TO ADDRESS ALL 13 ELEMENTS AS DESCRIBED BELOW AND FURTHER DETAILED IN TACOMA SWMM JULY 2021, AS APPLICABLE FOR THE PROJECT.

1. ELEMENT #1: PRESERVE VEGETATION AND MARK CLEARING LIMITS
   - 1.1. BEFORE BEGINNING ANY LAND DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, CLEARLY MARK ALL CLEARING LIMITS, SENSITIVE AREAS AND THEIR BUFFERS, AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA TO PREVENT DAMAGE AND OFFSITE IMPACTS. MARK CLEARING LIMITS BOTH IN THE FIELD AND ON THE PLANS.
   - 1.2. RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE. IF IT IS NOT PRACTICABLE TO RETAIN THE DUFF LAYER IN PLACE, STOCKPILE IT ONSITE, COVER IT TO PREVENT EROSION, AND REPLACE IT IMMEDIATELY UPON COMPLETION OF THE GROUND-DISTURBING ACTIVITIES.
   - 1.3. PLASTIC, METAL, FABRIC FENCE, OR OTHER PHYSICAL BARRIERS MAY BE USED TO MARK THE CLEARING LIMITS.
2. ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS
   - 2.1. LIMIT CONSTRUCTION VEHICLE INGRESS AND EGRESS TO ONE ROUTE, IF POSSIBLE.
   - 2.2. STABILIZE ACCESS POINTS WITH A PAD OF QUARRY SPALLS, CRUSHED ROCK, OR OTHER EQUIVALENT BMPS TO MINIMIZE TRACKING OF SEDIMENT.
   - 2.3. LOCATE WHEEL WASH OR TIRE BATHS ONSITE IF OTHER MEASURES FAIL TO CONTROL SEDIMENT FROM LEAVING THE SITE.
   - 2.4. NO TRACKING OF SEDIMENT OFFSITE IS ALLOWED. IF SEDIMENT IS TRACKED OFFSITE, OFFSITE AREAS (INCLUDING ROADWAYS) SHALL BE THOROUGHLY AND IMMEDIATELY CLEANED BY SHOVELING OR PICKUP SWEEPING. TRANSPORT SEDIMENT TO A CONTROLLED SEDIMENT DISPOSAL AREA.
   - 2.5. KEEP STREETS CLEAN AT ALL TIMES. CLEAN TRACKED SEDIMENT IMMEDIATELY.
   - 2.6. WASHING OF SEDIMENT TO THE STORMWATER SYSTEM IS NOT ALLOWED.
3. ELEMENT #3: CONTROL FLOW RATES
   - 3.1. PROTECT DOWNSTREAM PROPERTIES, RECEIVING WATERS, AND CONVEYANCE SYSTEMS FROM EROSION AND OTHER DAMAGE DUE TO INCREASES IN THE VELOCITY AND PEAK VOLUMETRIC FLOWRATE OF STORMWATER FROM THE PROJECT SITE. A QUANTITATIVE DOWNSTREAM ANALYSIS MAY BE REQUIRED TO ENSURE NO DAMAGE TO THE DOWNSTREAM CONVEYANCE SYSTEM DURING CONSTRUCTION. SEE ADDITIONAL PROTECTIVE MEASURE – INFRASTRUCTURE PROTECTION.
   - 3.2. WHERE NECESSARY, CONSTRUCT FLOW CONTROL FACILITIES AS ONE OF THE FIRST STEPS IN GRADING. FLOW CONTROL FACILITIES SHALL BE FUNCTIONAL PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS (E.G. IMPERVIOUS SURFACES). IT MAY BE NECESSARY TO INSTALL TEMPORARY FLOW CONTROL FACILITIES TO MEET FLOW CONTROL REQUIREMENTS DURING CONSTRUCTION.
   - 3.3. CONTROL STRUCTURES DESIGNED FOR PERMANENT FLOW CONTROL BMPS ARE NOT APPROPRIATE FOR USE DURING CONSTRUCTION WITHOUT MODIFICATION. IF USED DURING CONSTRUCTION, MODIFY THE CONTROL STRUCTURE TO ALLOW FOR LONG-TERM STORAGE OF RUNOFF AND ENABLE SEDIMENTS TO SETTLE. VERIFY THAT THE BMP IS SIZED APPROPRIATELY FOR THIS PURPOSE. RESTORE BMPS TO THEIR ORIGINAL DESIGN DIMENSIONS, REMOVE SEDIMENT, AND INSTALL A FINAL CONTROL STRUCTURE AT COMPLETION OF THE PROJECT.
   - 3.4. VELOCITY OF WATER LEAVING THE SITE SHALL NOT EXCEED 3 FEET/SECOND IF THE DISCHARGE IS TO A STREAM OR DITCH.
   - 3.5. PERMANENT INFILTRATION FACILITIES SHALL NOT BE USED FOR FLOW CONTROL DURING CONSTRUCTION UNLESS LINED. THE BOTTOM OF THE FACILITY SHALL BE SCARIFIED TO ENSURE ANY COMPACTION THAT OCCURRED DURING CONSTRUCTION IS MITIGATED.
4. ELEMENT #7: PROTECT STORMWATER SYSTEM INLETS
   - 4.1. PROTECT ALL STORMWATER SYSTEM INLETS THAT ARE OPERABLE DURING CONSTRUCTION SO THAT STORMWATER DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT.
   - 4.2. CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED 1/3 OF THE AVAILABLE STORAGE (UNLESS A DIFFERENT STANDARD IS SPECIFIED BY THE PRODUCT MANUFACTURER).
   - 4.3. KEEP ALL APPROACH ROADS CLEAN. DO NOT ALLOW SEDIMENT TO ENTER THE STORMWATER SYSTEM.
   - 4.4. INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS.
5. ELEMENT #9: CONTROL POLLUTANTS
   - 5.1. DESIGN, INSTALL, IMPLEMENT AND MAINTAIN EFFECTIVE POLLUTION PREVENTION MEASURES TO MINIMIZE THE DISCHARGE OF POLLUTANTS.
   - 5.2. ALL DISCHARGES TO THE CITY OF TACOMA WASTEWATER SYSTEM REQUIRE CITY APPROVAL. SOME DISCHARGES TO THE CITY OF TACOMA STORMWATER SYSTEM REQUIRE CITY APPROVAL. THE APPROVAL MAY INCLUDE A SEPARATE SPECIAL APPROVED DISCHARGE (SAD) PERMIT. VISIT HTTPS: // WWW.CITYOFTACOMA.ORG/GOVERNMENT/CITY_DEPARTMENTS/ENVIRONMENTALSERVICES/WASTEWATER/ WASTEWATER_PERMITS_AND_MANUALS FOR ADDITIONAL INFORMATION ABOUT SAD PERMITS.
   - 5.3. HANDLE AND DISPOSE OF ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS THAT OCCUR ON SITE IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
   - 5.4. PROVIDE COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH AND THE ENVIRONMENT. PROVIDE SECONDARY CONTAINMENT FOR TANKS HOLDING POLLUTANTS INCLUDING ONSITE FUELING TANKS. SECONDARY CONTAINMENT MEANS PLACING TANKS OR CONTAINERS WITHIN AN IMPERVIOUS STRUCTURE CAPABLE OF CONTAINING 110% OF THE VOLUME CONTAINED IN THE LARGEST TANK WITHIN THE CONTAINMENT STRUCTURE. DOUBLE-WALLED TANKS DO NOT REQUIRE ADDITIONAL SECONDARY CONTAINMENT.
   - 5.5. CONDUCT MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES USING SPILL PREVENTION AND CONTROL MEASURES. CLEAN CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
   - 5.6. CONDUCT OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DEGREASING CLEANING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES, WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS.
   - 5.7. DISCHARGE WHEEL WASH OR TIRE BATH WASTEWATER TO A SEPARATE ONSITE TREATMENT SYSTEM THAT PREVENTS DISCHARGE TO SURFACE WATER. ALTERNATIVELY, DISCHARGE WHEEL WASH OR TIRE BATH WASTEWATER TO THE WASTEWATER SYSTEM (ONLY ALLOWED WITH SAD PERMIT APPROVAL).
   - 5.8. APPLY FERTILIZERS AND PESTICIDES IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICALS TO STORMWATER. FOLLOW MANUFACTURERS' RECOMMENDATIONS FOR APPLICATION RATES AND PROCEDURES.
   - 5.9. USE BMPS TO PREVENT OR TREAT CONTAMINATION OF STORMWATER BY PH MODIFYING SOURCES. THESE SOURCES INCLUDE, BUT ARE NOT LIMITED TO, RECYCLED CONCRETE STOCKPILES, BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, DEWATERING CONCRETE VAULTS, AND CONCRETE PUMPING AND MIXER WASHOUT WATERS.
   - 5.10. ADJUST THE PH OF STORMWATER IF NECESSARY TO PREVENT VIOLATIONS OF WATER QUALITY STANDARDS.
   - 5.11. MANAGE CONCRETE WASHOUT APPROPRIATELY.
     - 5.11.1. WASHOUT CONCRETE TRUCK DRUMS OR CONCRETE HANDLING EQUIPMENT IN ONSITE OR OFFSITE DESIGNATED CONCRETE WASHOUT AREAS ONLY.
     - 5.11.2. DO NOT WASHOUT CONCRETE TRUCK DRUMS OR CONCRETE HANDLING EQUIPMENT TO STREETS, THE STORMWATER SYSTEM, RECEIVING WATERBODIES, OR THE GROUND.
       - 5.11.2.1. WASHOUT OF SMALL CONCRETE HANDLING EQUIPMENT MAY BE DISPOSED OF IN A FORMED AREAS AWAITING CONCRETE WHERE IT WILL NOT CONTAMINATE STORMWATER AND SURFACE WATER OR GROUNDWATER.
     - 5.11.3. DO NOT USE UPLAND LAND APPLICATIONS FOR DISCHARGING WASTEWATER FROM CONCRETE WASHOUT AREAS.
     - 5.11.4. DO NOT DUMP EXCESS CONCRETE ONSITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS.
     - 5.11.5. DO NOT WASHOUT ANYTHING CONTAMINATED WITH CONCRETE INTO FORMED AREAS AWAITING INFILTRATION BMPS.
     - 5.11.6. CONCRETE SPILLAGE OR CONCRETE DISCHARGE DIRECTLY TO GROUNDWATER OR SURFACE WATERS OF THE STATE IS PROHIBITED.
   - 5.12. WRITTEN APPROVAL FROM THE DEPARTMENT OF ECOLOGY IS REQUIRED PRIOR TO USING CHEMICAL TREATMENT OTHER THAN CO2, DRY ICE, OR FOOD GRADE VINEGAR TO ADJUST PH.
   - 5.13. CLEAN CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT.
   - 5.14. UNCONTAMINATED WATER FROM WATER-ONLY BASED SHAFT DRILLING FOR CONSTRUCTION OF BUILDING, ROAD, AND BRIDGE FOUNDATIONS MAY BE INFILTRATED PROVIDED THE WASTEWATER IS MANAGED IN A WAY THAT PROHIBITS DISCHARGE TO SURFACE WATERS. PRIOR TO INFILTRATION, WATER FROM WATER-ONLY BASED SHAFT DRILLING THAT COMES INTO CONTACT WITH CURING CONCRETE MUST BE NEUTRALIZED UNTIL PH IS IN THE RANGE OF 6.5 TO 8.5.
6. ELEMENT #10: CONTROL DEWATERING
   - 6.1. DEWATERING DISCHARGES TO THE CITY OF TACOMA STORMWATER CONVEYANCE SYSTEM OR THE CITY OF TACOMA WASTEWATER SYSTEM MAY REQUIRE CITY APPROVAL THROUGH A SPECIAL APPROVED DISCHARGE (SAD) PERMIT. SEE HTTPS: //WWW.CITYOFTACOMA.ORG/GOVERNMENT/ CITY_DEPARTMENTS/ENVIRONMENTALSERVICES/WASTEWATER/WASTEWATER_PERMITS_AND_MANUALS FOR MORE INFORMATION ON THE SAD PERMIT PROCESS. SAD PERMIT MAY TAKE UP TO 30 DAYS FOR APPROVAL.
   - 6.2. DISCHARGE FOUNDATION, VAULT, AND TRENCH DEWATERING WATER THAT HAS SIMILAR CHARACTERISTICS TO SITE STORMWATER INTO A CONTROLLED CONVEYANCE SYSTEM PRIOR TO DISCHARGE TO A SEDIMENT TRAP OR SEDIMENT POND. STABILIZE CHANNELS AS SPECIFIED IN ELEMENT #8.
   - 6.3. CLEAN, NON-TURBID DEWATERING WATER, SUCH AS WELL-POINT GROUNDWATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO STATE SURFACE WATERS, AS SPECIFIED IN ELEMENT #8, PROVIDED THE DEWATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. DO NOT ROUTE CLEAN DEWATERING WATER THROUGH TESC BMPS.
   - 6.4. HANDLE HIGHLY TURBID OR CONTAMINATED DEWATERING WATER SEPARATELY FROM STORMWATER AT THE SITE.
   - 6.5. OTHER DISPOSAL OPTIONS, DEPENDING ON SITE CONSTRAINTS, MAY INCLUDE:
     - 6.5.1. INFILTRATION
     - 6.5.2. TRANSPORT OFFSITE IN VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS
     - 6.5.3. ECOLOGY APPROVED ONSITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES
     - 6.5.4. USE OF A SEDIMENTATION BAG THAT DISCHARGES TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DEWATERING
7. ELEMENT #11: MAINTAIN BMPS
   - 7.1. MAINTAIN AND REPAIR AS NEEDED ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. CONDUCT MAINTENANCE AND REPAIRS IN ACCORDANCE WITH BMP SPECIFICATIONS.
   - 7.2. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL BMPS WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ONSITE. PERMANENTLY STABILIZE DISTURBED SOIL RESULTING FROM REMOVAL OF BMPS OR VEGETATION.
8. ELEMENT #12: MANAGE THE PROJECT
   - 8.1. PHASING OF CONSTRUCTION – PHASE DEVELOPMENT PROJECTS IN ORDER TO PREVENT SOIL EROSION AND THE TRANSPORT OF SEDIMENT FROM THE PROJECT SITE DURING CONSTRUCTION, UNLESS THE EROSION AND SEDIMENT CONTROL LEAD CAN DEMONSTRATE THAT CONSTRUCTION PHASING IS INFEASIBLE. REVEGETATION OF EXPOSED AREAS AND MAINTENANCE OF THAT VEGETATION SHALL BE AN INTEGRAL PART OF THE CLEARING ACTIVITIES FOR ANY PHASE.
   - 8.2. SEASONAL WORK LIMITATIONS – FROM OCTOBER 1 THROUGH APRIL 30, CLEARING, GRADING, AND OTHER SOIL DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IF SHOWN TO THE SATISFACTION OF THE CITY THAT SILT-LADEN STORMWATER WILL BE PREVENTED FROM LEAVING THE SITE THROUGH A COMBINATION OF THE FOLLOWING:
     - 8.2.1. SITE CONDITIONS INCLUDING EXISTING VEGETATIVE COVERAGE, SLOPE, SOIL TYPE, AND PROXIMITY TO RECEIVING WATERS;
     - 8.2.2. LIMITATIONS ON ACTIVITIES AND THE EXTENT OF DISTURBED AREAS; AND
     - 8.2.3. PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.
   - 8.3. BASED ON THE INFORMATION PROVIDED AND LOCAL WEATHER CONDITIONS, THE CITY MAY EXPAND OR RESTRICT THE SEASONAL LIMITATION ONSITE DISTURBANCE. THE FOLLOWING ACTIVITIES ARE EXEMPT FROM THE SEASONAL CLEARING AND GRADING LIMITATIONS:
     - 8.3.1. ROUTINE MAINTENANCE AND NECESSARY REPAIR OF EROSION AND SEDIMENT CONTROL BMPS
     - 8.3.2. ROUTINE MAINTENANCE OF PUBLIC FACILITIES OR EXISTING UTILITY STRUCTURES THAT DO NOT EXPOSE THE SOIL OR RESULT IN THE REMOVAL OF THE VEGETATIVE COVER TO SOIL
     - 8.3.3. ACTIVITIES WHERE THERE IS ONE HUNDRED PERCENT INFILTRATION OF STORMWATER WITHIN THE SITE IN APPROVED AND INSTALLED EROSION AND SEDIMENT CONTROL FACILITIES
   - 8.4. INSPECTION AND MONITORING
     - 8.4.1. INSPECT, MAINTAIN, AND REPAIR ALL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. PROJECTS REGULATED UNDER THE CONSTRUCTION STORMWATER GENERAL PERMIT (CSWGP) MUST CONDUCT SITE INSPECTIONS AND MONITORING IN ACCORDANCE WITH SPECIAL CONDITION S4 OF THE CSWGP.
     - 8.4.2. PROJECTS THAT DISTURB ONE OR MORE ACRES MUST HAVE SITE INSPECTIONS CONDUCTED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).
     - 8.4.3. PROJECTS DISTURBING LESS THAN ONE ACRE MUST HAVE AN EROSION SEDIMENT CONTROL LEAD (ESC) CONDUCT INSPECTIONS. THE ESC LEAD DOES NOT HAVE TO HAVE CESCL OR CPESC CERTIFICATION.
     - 8.4.4. THE CESCL, CPESC, OR ESC LEAD SHALL BE IDENTIFIED IN THE SWPPP AND SHALL BE ONSITE OR ON-CALL AT ALL TIMES.
     - 8.4.5. THE CESCL, CPESC, OR ESC LEAD MUST EXAMINE STORMWATER VISUALLY FOR THE PRESENCE OF SUSPENDED SEDIMENT, TURBIDITY, DISCOLORATION, AND OIL SHEEN AND EVALUATE THE EFFECTIVENESS OF BMPS TO DETERMINE IF IT IS NECESSARY TO INSTALL, MAINTAIN, OR REPAIR BMPS.
     - 8.4.6. THE CESCL, CPESC, OR ESC LEAD MUST INSPECT ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, ALL BMPS, AND ALL LOCATIONS WHERE STORMWATER LEAVES THE SITE AT LEAST ONCE EVERY CALENDAR WEEK AND WITHIN 24 HOURS OF ANY DISCHARGE FROM THE SITE. (INDIVIDUAL DISCHARGE EVENTS THAT LAST MORE THAN ONE DAY DO NOT REQUIRE DAILY INSPECTIONS). THE CESCL, CPESC, OR ESC LEAD MAY REDUCE THE INSPECTION FREQUENCY FOR TEMPORARY STABILIZED, INACTIVE SITES TO ONCE EVERY CALENDAR MONTH.
     - 8.4.7. CONSTRUCTION SITE OPERATORS MUST CORRECT ANY PROBLEMS IDENTIFIED BY THE CESCL, CPESC, OR ESC LEAD BY:
       - 8.4.7.1. REVIEWING THE SWPPP FOR COMPLIANCE WITH THE 13 CONSTRUCTION SWPPP ELEMENTS AND MAKING APPROPRIATE REVISIONS WITHIN 7 DAYS OF THE INSPECTION.
       - 8.4.7.2. FULLY IMPLEMENTING AND MAINTAINING APPROPRIATE SOURCE CONTROL AND/OR TREATMENT BMPS AS SOON AS POSSIBLE BUT CORRECTING THE PROBLEM WITHIN 10 DAYS.
       - 8.4.7.3. DOCUMENTING BMP IMPLEMENTATION AND MAINTENANCE IN THE SITE LOG BOOK. (REQUIRED FOR SITES LARGER THAN 1 ACRE BUT RECOMMENDED FOR ALL SITES).
       - 8.4.7.4. SAMPLING AND ANALYSIS OF THE STORMWATER DISCHARGES FROM A CONSTRUCTION SITE MAY BE NECESSARY ON A CASE-BY-CASE BASIS TO ENSURE COMPLIANCE WITH STANDARDS. ECOLOGY OR THE CITY WILL ESTABLISH THESE MONITORING AND ASSOCIATED REPORTING REQUIREMENTS.
   - 8.5. RESPONSIBLE PARTY – FOR ALL PROJECTS, A 24-HOUR RESPONSIBLE PARTY SHALL BE LISTED IN THE SWPPP, ALONG WITH THAT PERSON'S TELEPHONE NUMBER AND EMAIL ADDRESS.
   - 8.6. MAINTENANCE OF THE CONSTRUCTION SWPPP – KEEP THE CONSTRUCTION SWPPP ONSITE OR WITHIN REASONABLE ACCESS TO THE SITE. MODIFY THE SWPPP WHENEVER THERE IS A CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE AT THE CONSTRUCTION SITE THAT HAS, OR COULD HAVE, A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO WATERS OF THE STATE.
     - 8.6.1. MODIFY THE SWPPP IF, DURING INSPECTIONS OR INVESTIGATIONS CONDUCTED BY THE OWNER/ OPERATOR, CITY STAFF, OR BY LOCAL OR STATE OFFICIALS, IT IS DETERMINED THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN STORMWATER DISCHARGES FROM THE SITE. MODIFY THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL OR MODIFIED BMPS DESIGNED TO CORRECT PROBLEMS IDENTIFIED. COMPLETE REVISIONS TO THE SWPPP WITHIN SEVEN (7) DAYS FOLLOWING THE INSPECTION. CITY OF TACOMA ENVIRONMENT SERVICES (REVIEW STAFF OR INSPECTOR) MAY REQUIRE THAT A MODIFICATION TO THE SWPPP GO THROUGH ADDITIONAL CITY REVIEW.
9. ELEMENT #13: PROTECT PERMANENT STORMWATER BMPS
   - 9.1. PROTECT ALL PERMANENT STORMWATER BMPS FROM SEDIMENTATION THROUGH INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMPS ON PORTIONS OF THE SITE THAT DRAIN INTO THE BMPS. RESTORE ALL BMPS TO THEIR FULLY FUNCTIONING CONDITION IF THEY ACCUMULATE SEDIMENT DURING CONSTRUCTION. SEDIMENT IMPACTING BEST MANAGEMENT PRACTICES SHALL BE REMOVED BEFORE SYSTEM START-UP. RESTORING THE BMP SHALL INCLUDE REMOVAL OF ALL SEDIMENT AND FULL REPLACEMENT OF TREATMENT MEDIA.
   - 9.2. PREVENT COMPACTING INFILTRATION FACILITIES BY EXCLUDING CONSTRUCTION EQUIPMENT AND FOOT TRAFFIC.
   - 9.3. KEEP ALL HEAVY EQUIPMENT OFF NATIVE SOILS UNDER INFILTRATION BMPS THAT HAVE BEEN EXCAVATED TO FINAL GRADE TO RETAIN THE INFILTRATION RATE OF THE SOILS.
   - 9.4. PROTECT LAWN AND LANDSCAPED AREAS FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT AND MATERIAL STOCKPILES.
   - 9.5. DO NOT ALLOW MUDDY CONSTRUCTION EQUIPMENT ON THE BASE MATERIAL OF PERMEABLE PAVEMENT OR ON THE PERMEABLE PAVEMENT SECTION.
   - 9.6. DO NOT ALLOW SEDIMENT LADEN RUNOFF ONTO PERMEABLE PAVEMENTS OR BASE MATERIALS OF PERMEABLE PAVEMENTS.
   - 9.7. PERMEABLE PAVEMENTS FOULED WITH SEDIMENT OR THAT CAN NO LONGER PASS AN INITIAL INFILTRATION TEST MUST BE CLEANED PRIOR TO FINAL ACCEPTANCE.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

EDWARD A. FUENTES — REGISTERED PROFESSIONAL ENGINEER — 45453 — STATE OF WASHINGTON — BENJAMIN — 04.02.25

APPROVED:
DIRECTOR ENG: DATE 12-3-25

–			
CHECKED BY	DATE		
B. FUENTES			
PROJ. ENGR	DATE		

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

PRINTED BY:

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

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C5.05
58 OF 105

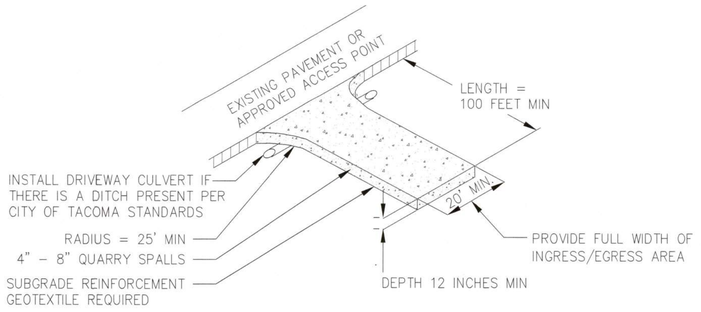
CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC NOTES

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

PORT OF TACOMA FILE: C:\bms\kjce-pw\d0130409\1028402-C5.05 (TESC NOTES)

BINDING EDGE



NOTES:
1. DRIVEWAY SHALL MEET REQUIREMENTS OF THE CITY OF TACOMA.
2. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF OF THE PAD.
3. RECYCLED CONCRETE CEMENT OR ASPHALT RUBBLE CANNOT BE USED FOR QUARRY SPALLS.
4. FOR RESIDENTIAL CONSTRUCTION PROVIDE STABILIZED CONSTRUCTION ENTRANCES/EXITS FOR EACH RESIDENCE. STABILIZED SURFACES SHALL BE OF SUFFICIENT LENGTH/WIDTH TO PROVIDE VEHICLE ACCESS/PARKING BASED UPON LOT SIZE AND CONFIGURATION

1 CONSTRUCTION ENTRANCE
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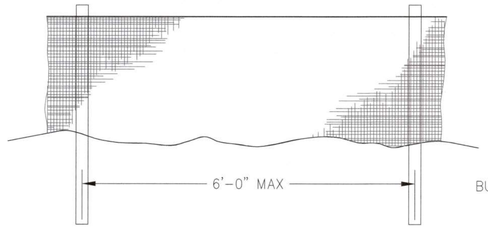
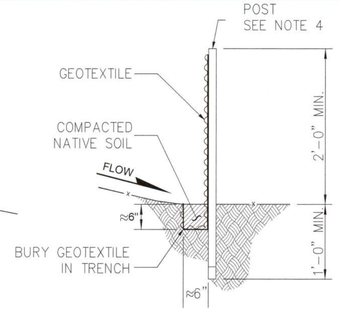


FRONT VIEW

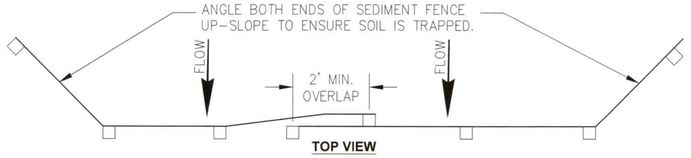


SIDE VIEW

NOTES:
1. SILT FENCE EXTENTS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE EXTENTS OF THE SILT FENCE AS NECESSARY TO PREVENT SEDIMENT AND SEDIMENT–LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
2. REFER TO SPECIFICATIONS SECTION 01 57 13 FOR COMPLETE EROSION AND SEDIMENT CONTROL REQUIREMENTS.
3. BURY BOTTOM OF FILTER FABRIC 6" MIN. VERTICALLY BELOW FINISHED GRADE.
4. 2" x 2" FIR, PINE, OR STEEL FENCE POSTS.
5. STITCHED LOOPS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
6. COMPACT NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH.
7. DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE. SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.

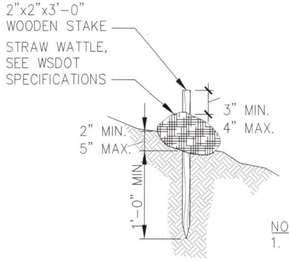
SEDIMENT FENCE SPACING:

SLOPE	SPACING
<10%	300 FT.
<15%	150 FT.
<20%	100 FT.
<30%	50 FT.
<50%	25 FT.
STOCK PILE SLOPE >50%	25 FT.



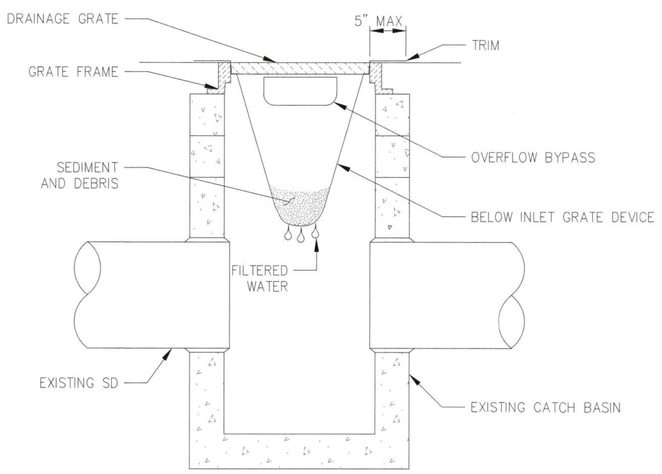
TOP VIEW

2 SILT FENCE
SCALE: NTS

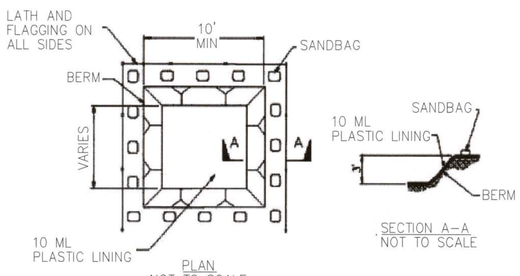


NOTE:
1. SUPPORT STRAW WATTLES WITH SAND BAGS WHERE INSTALLED ACROSS PAVEMENT.

3 STRAW WATTLE
SCALE: NTS

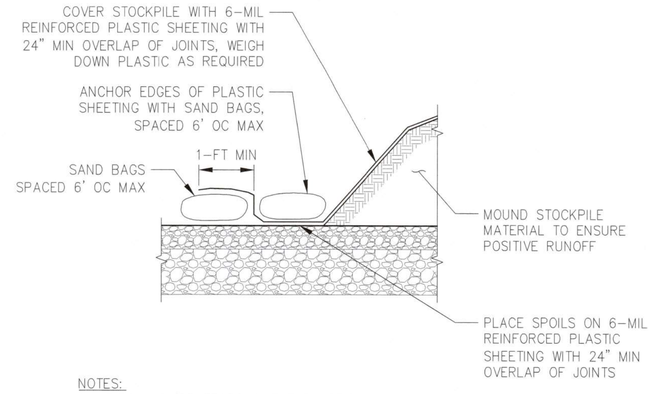


4 CATCH BASIN FILTER
SCALE: NTS



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

5 CONCRETE WASHOUT
SCALE: NTS



NOTES:
1. RIPS AND/OR TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER PER SPECIFICATION SECTION 01 57 13.
2. MATERIAL SHALL BE STOCKPILED NO STEEPER THAN 1 TO 1 SLOPE.
3. THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2 FT FROM THE EDGE OF EXCAVATION.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 10 FT.

6 STOCKPILE DETAIL
SCALE: NTS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

EDWARD ALFREDO FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 45453 — 04.02.25

	CHECKED BY	DATE
–	B. FUENTES	

APPROVED:	PROJ. ENGR	DATE
Director Eng.		

PRINTED BY: 12:25 pm, Aug 25, 2025

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
TESC DETAILS

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401–1837

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6688
C5.06
59 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

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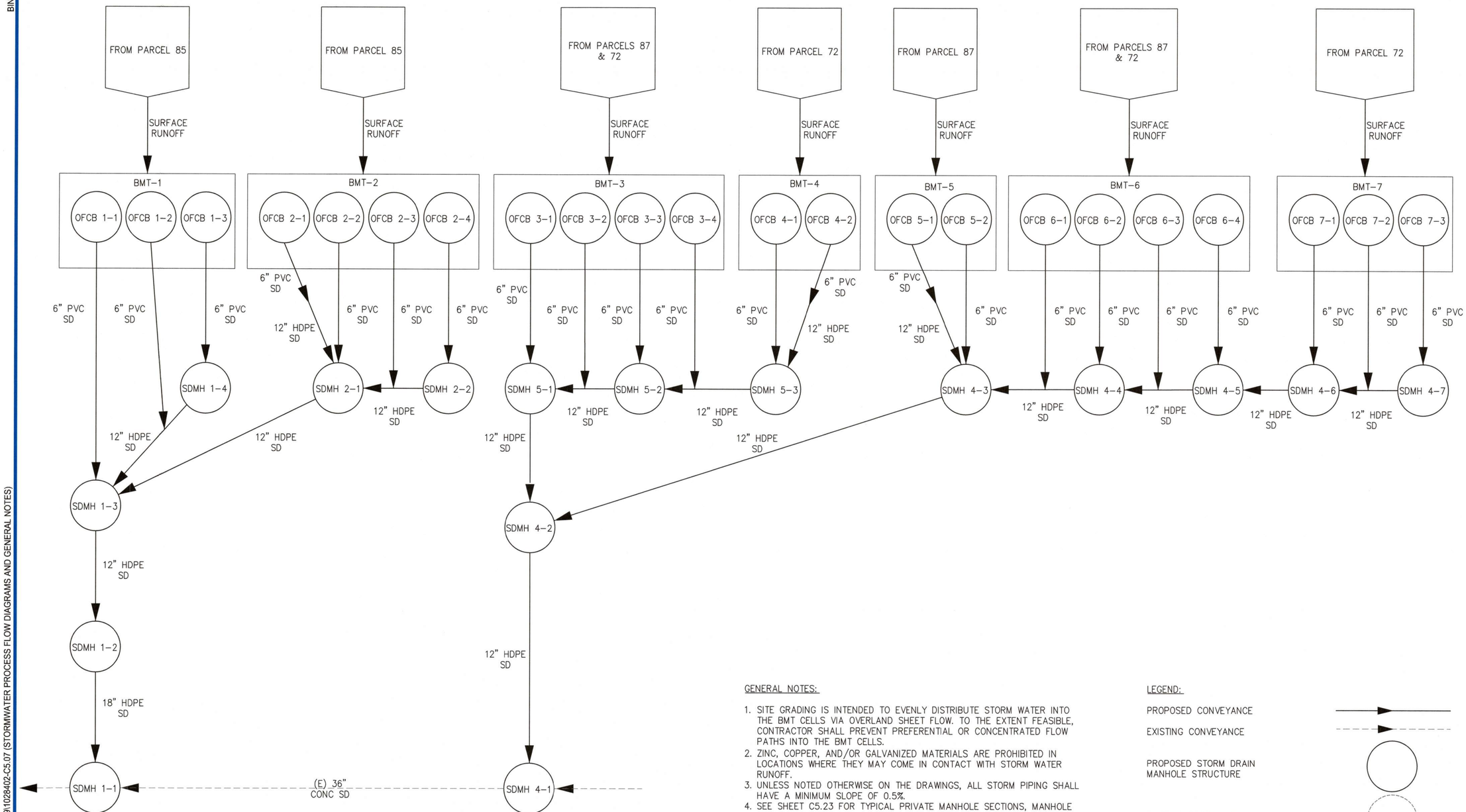

GENERAL NOTES:

1. SITE GRADING IS INTENDED TO EVENLY DISTRIBUTE STORM WATER INTO THE BMT CELLS VIA OVERLAND SHEET FLOW. TO THE EXTENT FEASIBLE, CONTRACTOR SHALL PREVENT PREFERENTIAL OR CONCENTRATED FLOW PATHS INTO THE BMT CELLS.
2. ZINC, COPPER, AND/OR GALVANIZED MATERIALS ARE PROHIBITED IN LOCATIONS WHERE THEY MAY COME IN CONTACT WITH STORM WATER RUNOFF.
3. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL STORM PIPING SHALL HAVE A MINIMUM SLOPE OF 0.5%.
4. SEE SHEET C5.23 FOR TYPICAL PRIVATE MANHOLE SECTIONS, MANHOLE DETAILS, AND TYPICAL PIPE TRENCHING DETAIL. SEE C5.24 FOR TYPICAL DETAILS FOR PUBLIC MANHOLES SDMH 1-1 AND SDMH 4-1.
5. WORK IN THE ROW SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE CITY STD PLANS.
   - 5.1. MANHOLES AND ASSOCIATED FRAMES AND COVERS PER SU-17 AND SU-22, RESPECTIVELY.
   - 5.2. TRENCHING AND RESURFACING PER SU-14 AND SU-16, RESPECTIVELY.
6. CARE SHALL BE TAKEN TO NOT COMPACT THE MEDIA INSTALLED WITHIN THE BMTS (I.E. DRAIN ROCK, BMT MIX, COMPOST, AND BALLAST).

LEGEND:

PROPOSED CONVEYANCE

EXISTING CONVEYANCE

PROPOSED STORM DRAIN MANHOLE STRUCTURE

EXISTING STORM DRAIN MANHOLE STRUCTURE

STORMWATER PROCESS FLOW DIAGRAM AND GENERAL NOTES

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks
moffatt & nichol

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EDWARD BENJAMIN FUENTES — 48435 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

APPROVED:
DIRECTOR ENG. DATE

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TACOMA, WA 98401-1837

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ENG.	DATE	PROJ. ENGR	DATE

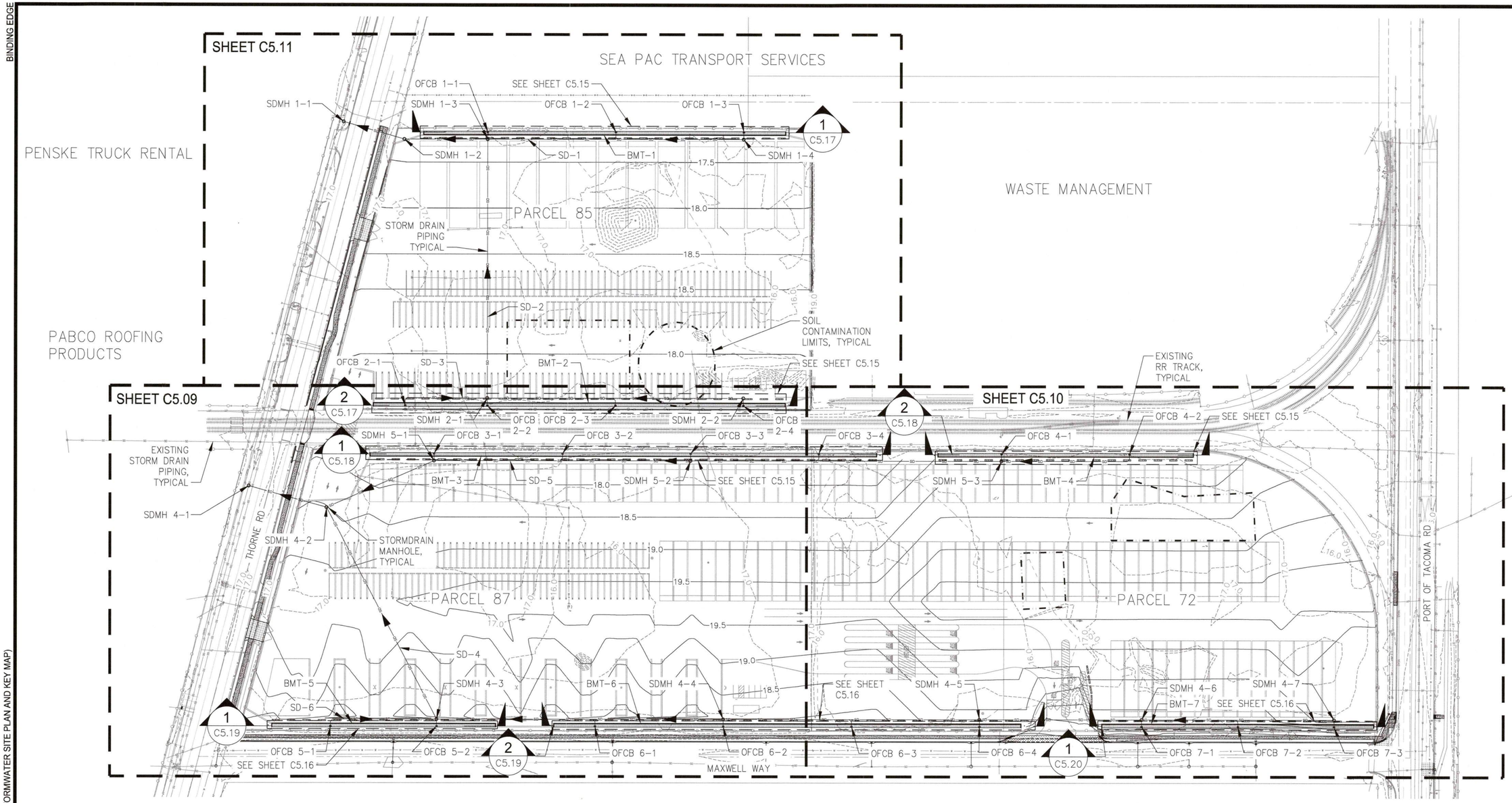
THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER PROCESS FLOW DIAGRAMS AND GENERAL NOTES

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34
M. ID: 10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100%	PARCEL:		

6688
C5.07
60 OF 105

PORT OF TACOMA FILE: C:\bms\kjce-pw\d0130409\1028402-C5.07 (STORMWATER PROCESS FLOW DIAGRAMS AND GENERAL NOTES).dwg
BINDING EDGE

BINDING EDGE



PLAN
SCALE: 1" = 80'

NOTES:
1. THE ENGINEER OF RECORD SHALL PROVIDE AN ENGINEER'S CERTIFICATION TO THE CITY OF TACOMA AFTER FACILITY INSTALLATION AMD PRIOR TO FINAL INSPECTION AND/OR CLOSEOUT.
2. STORM CONNECTION PERMIT(S) IS/ARE REQUIRED. FOR QUESTIONS, CONTACT SITE DEVELOPMENT AT 253-591-5670. TO APPLY FOR PERMIT, GO TO TACOMAPERMITS.ORG. SEPARATE PERMITS ARE REQUIRED FOR EACH CONNECTION(S) AND/OR THE NUMBER OF STORMWATER FACILITIES (WHICHEVER IS GREATER).
3. CHANGES OR REVISIONS TO THE ORIGINALLY APPROVED PERMIT SUBMITTAL SHALL BE SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION.
4. THE APPLICANT SHALL SUBMIT RECORD DRAWINGS ("AS BUILTS") TO THE CITY WHEN THE PROJECT IS COMPLETED.

80'-0" 0'-0" 80'-0" 160'-0"
SCALE: 1"=80'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

BENJAMIN EDWARD FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 45457 — 04.02.25

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THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER SITE PLAN AND KEY MAP

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	DRAWING SCALE: AS NOTED
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

6688
C5.08
61 OF 105

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PORT OF TACOMA FILE: C:\bms\kjce-pw\d0130409\1028402-C5.08 (STORMWATER SITE PLAN AND KEY MAP)

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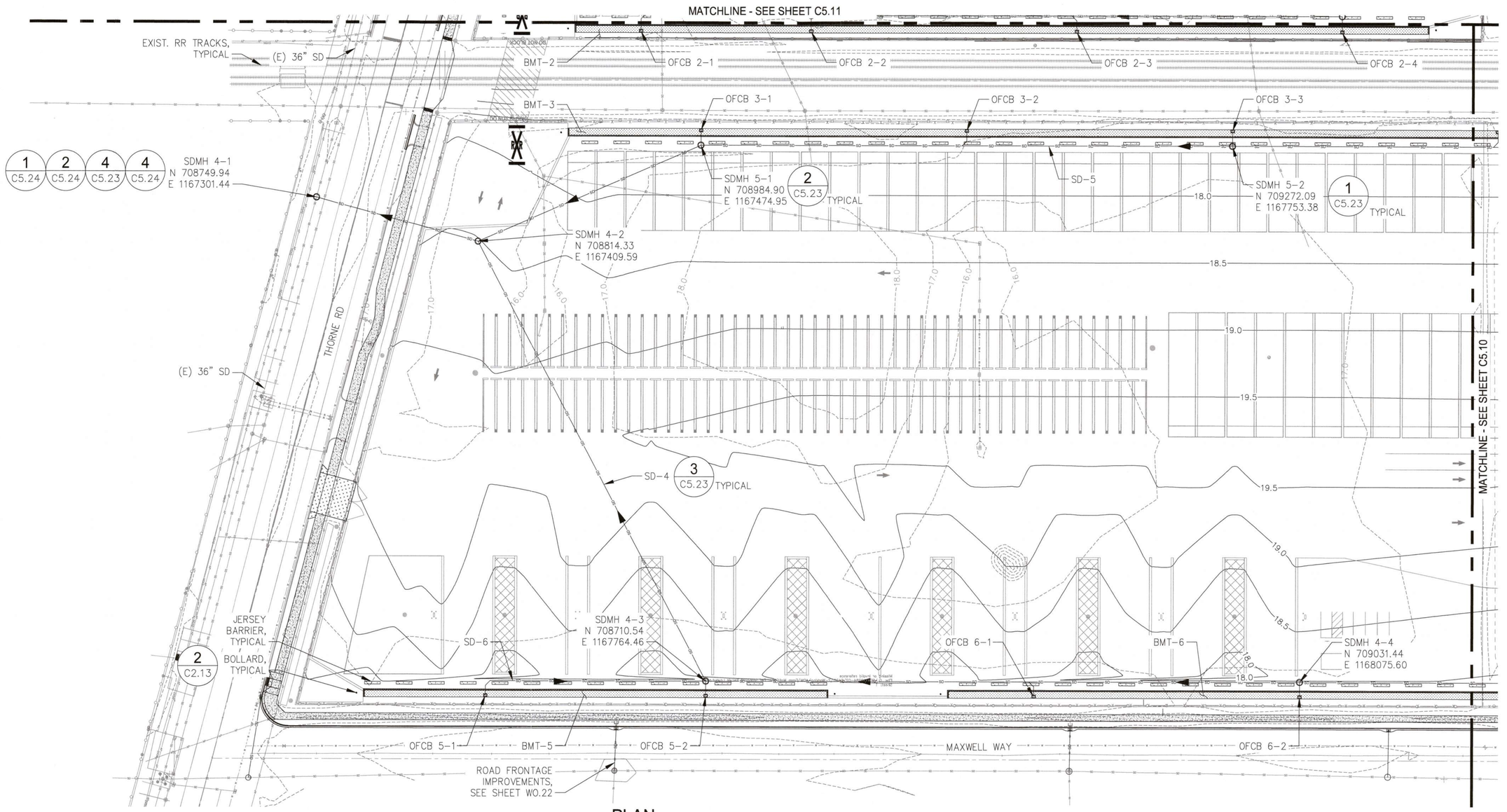
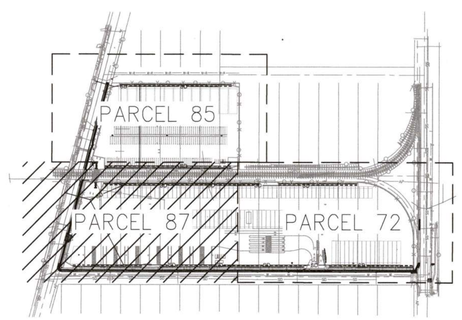


PLAN
SCALE: 1" = 40'

NOTES:

1. WHEN CONNECTING TO EXISTING UTILITIES, CONTRACTOR SHALL CONFIRM EXISTING UTILITY SIZE, MATERIAL, AND ELEVATION AT CONNECTION LOCATIONS PRIOR TO CONSTRUCTION.
2. STORM CONNECTION PERMITS ARE REQUIRED. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK SHOWN HEREON.



KEY PLAN
NOT TO SCALE

40'-0" 0'-0" 40'-0" 80'-0"

SCALE: 1"=40'-0"

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DATE: 2025-08-25

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APPROVED:
DIRECTOR ENG. DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - ENLARGED PLAN 01

–		CHECKED BY	DATE
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		PROJ. ENGR	DATE

CONT/CONS:	07190B	TOWNSHIP: 21N	RANGE: 3E
M. ID:	10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100%	PARCEL:	DRAWING SCALE: AS NOTED

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PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

SECTION: 27/34

6688
C5.09
62 OF 105

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PORT OF TACOMA FILE: C:\bmslkjce-pw\d0130409\10284O2-C5.09 (STORMWATER ENLARGED PLAN 01)

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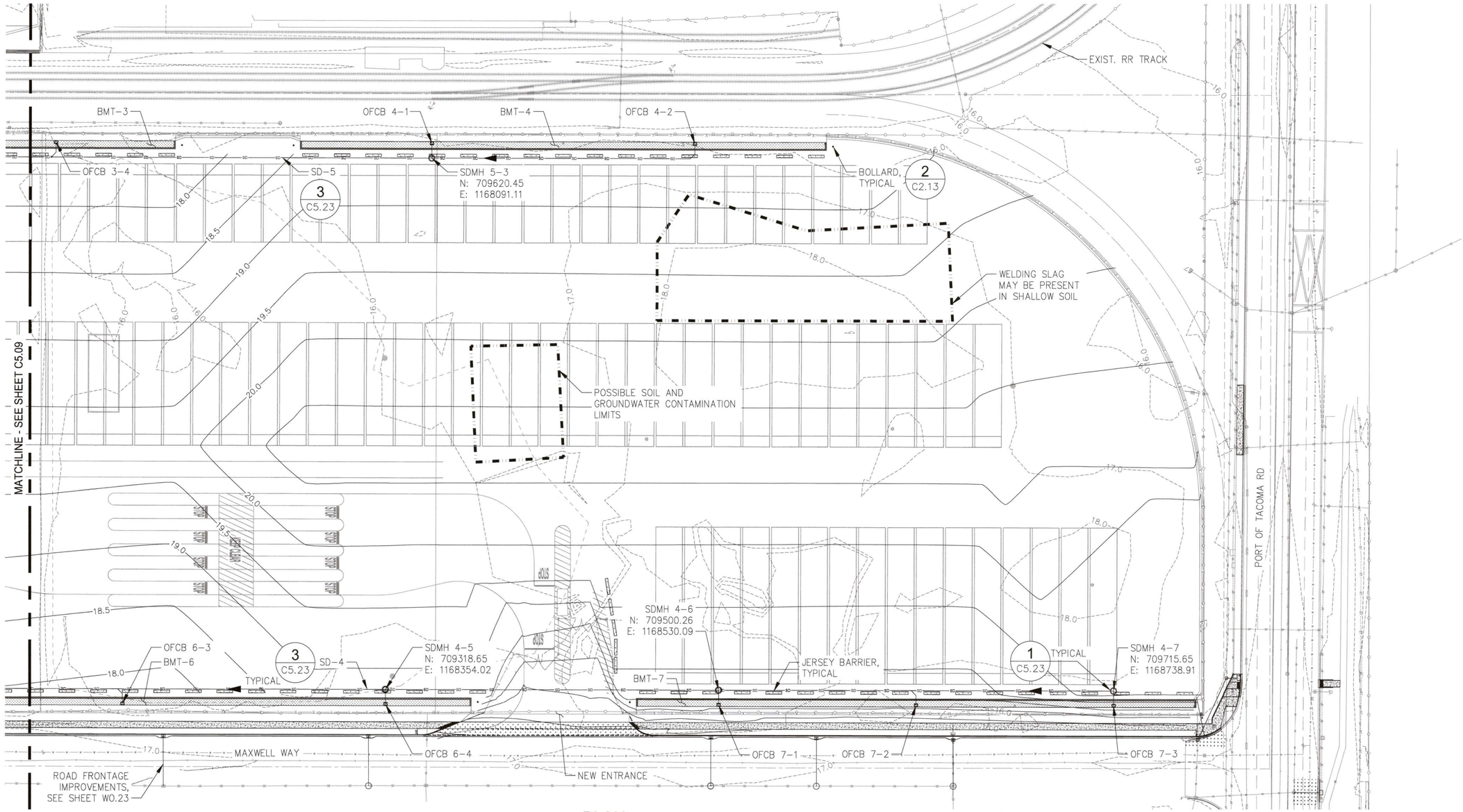
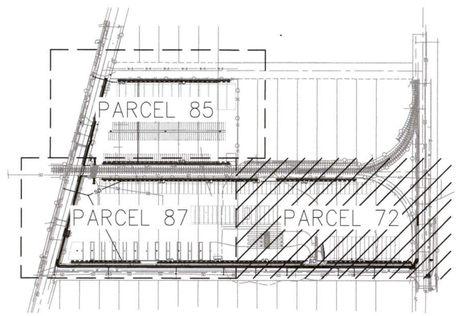


PLAN
SCALE: 1" = 40'

NOTES:

1. WHEN CONNECTING TO EXISTING UTILITIES, CONTRACTOR SHALL CONFIRM EXISTING UTILITY SIZE, MATERIAL, AND ELEVATION AT CONNECTION LOCATIONS PRIOR TO CONSTRUCTION.
2. STORM CONNECTION PERMITS ARE REQUIRED. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK SHOWN HEREON.



KEY PLAN
NOT TO SCALE

40'-0" 0'-0" 40'-0" 80'-0"

SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

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PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

DRAWING SCALE: AS NOTED

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - ENLARGED PLAN 02

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

6688
C5.10
63 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

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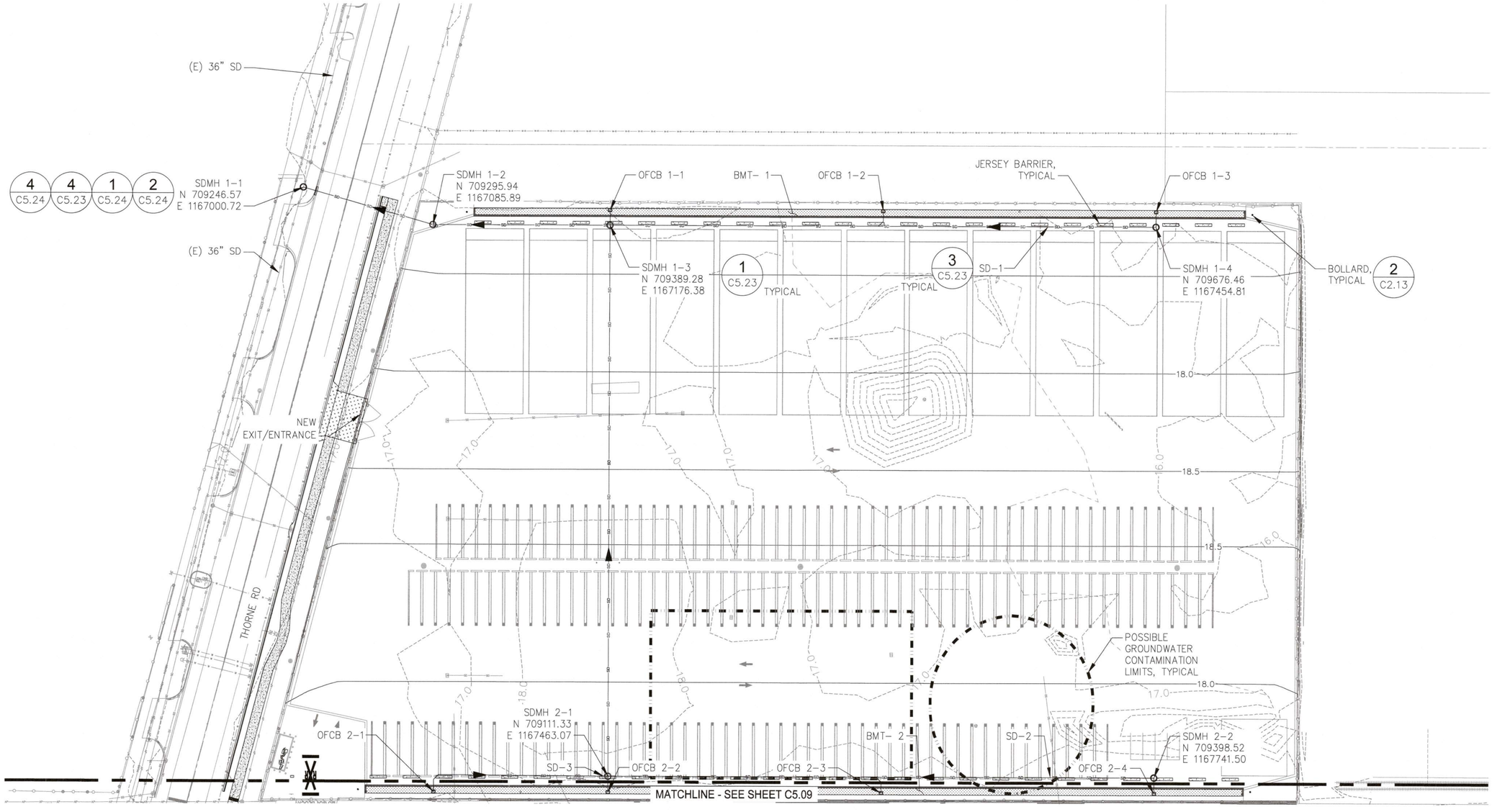
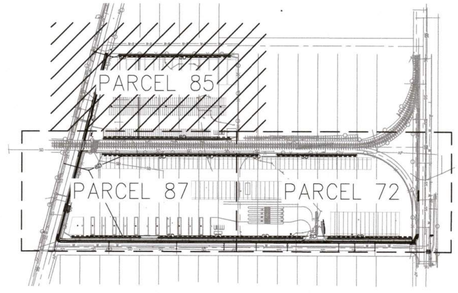


PLAN
SCALE: 1" = 40'

NOTES:

1. WHEN CONNECTING TO EXISTING UTILITIES, CONTRACTOR SHALL CONFIRM EXISTING UTILITY SIZE, MATERIAL, AND ELEVATION AT CONNECTION LOCATIONS PRIOR TO CONSTRUCTION.
2. STORM CONNECTION PERMITS ARE REQUIRED. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK SHOWN HEREON.



KEY PLAN
NOT TO SCALE

40'-0" 0'-0" 40'-0" 80'-0"
SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - ENLARGED PLAN 03

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6688
C5.11
64 OF 105

CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

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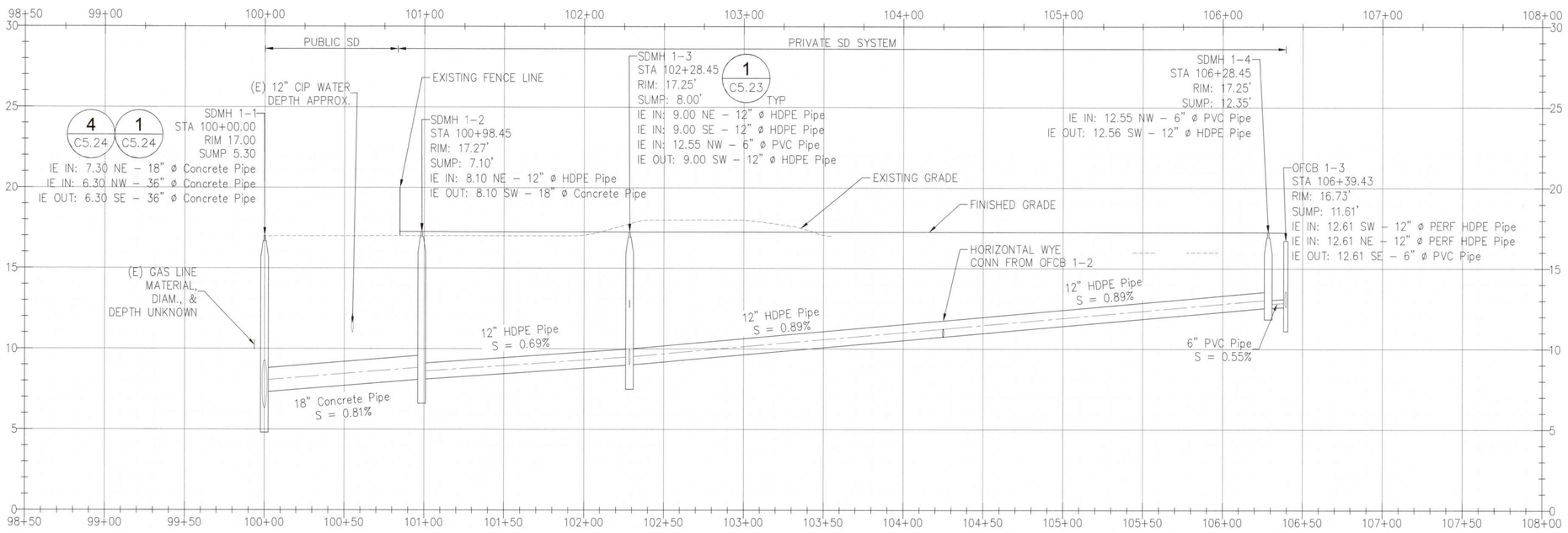
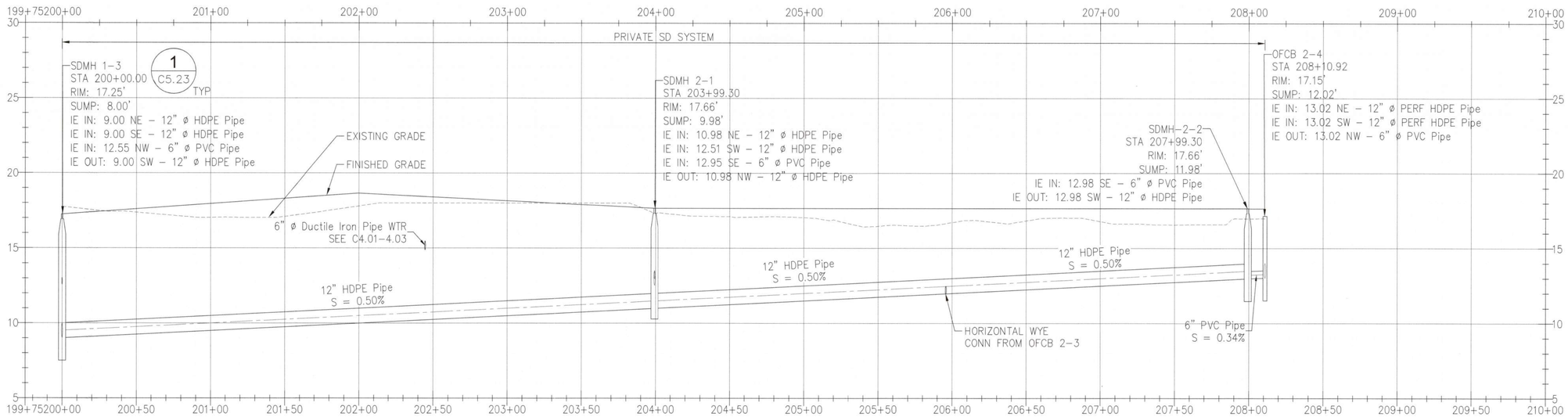
BINDING EDGE



1 / C5.12 **SD-1 PROFILE**
SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 / C5.12 **SD-2 PROFILE**
SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

VERT. SCALE: 1"=4'-0"

HORIZ. SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

GENERAL NOTES:
1. SDMH 1-1 IS A PUBLIC STORMWATER MANHOLE AND SHALL BE PER DETAILS 1 AND 4 ON C5.24. ALL OTHER STORMWATER MANHOLES ARE PRIVATE STRUCTURES AND SHALL BE PER DETAIL 1 ON C5.23.
2. SEE DETAIL 2 ON C5.23 FOR MANHOLE SIZE AND ORIENTATION OF CONNECTIONS.
3. SEE SHEETS C5.15 AND C5.16 FOR NORTHINGS AND EASTINGS OF OFCB STRUCTURES.
4. SEE SHEETS C5.17 TO C5.20 FOR STRUCTURE INFORMATION (I.E., RIM, STRUCTURE INVERT ELEVATION, AND PIPE INVERT ELEVATIONS) OF OFCB STRUCTURES.

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APPROVED:
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PORT ADDRESS:ONE SITCUM PLAZA
TACOMA, WA 98401-1837

DRAWING SCALE: AS NOTED

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B. FUENTES
PROJ. ENGR DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - PIPELINE PROFILES 01

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

6688
C5.12
65 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

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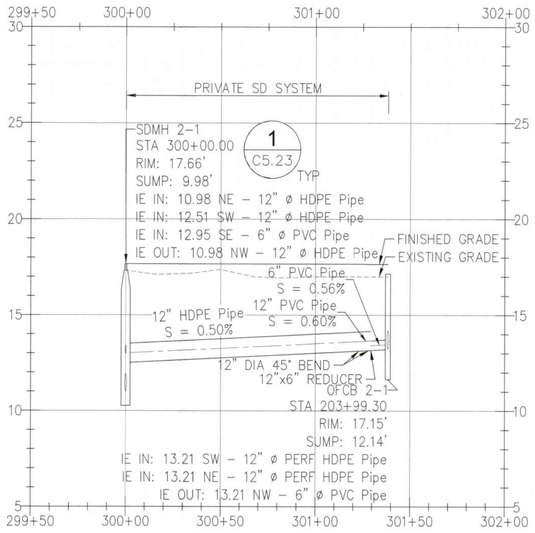
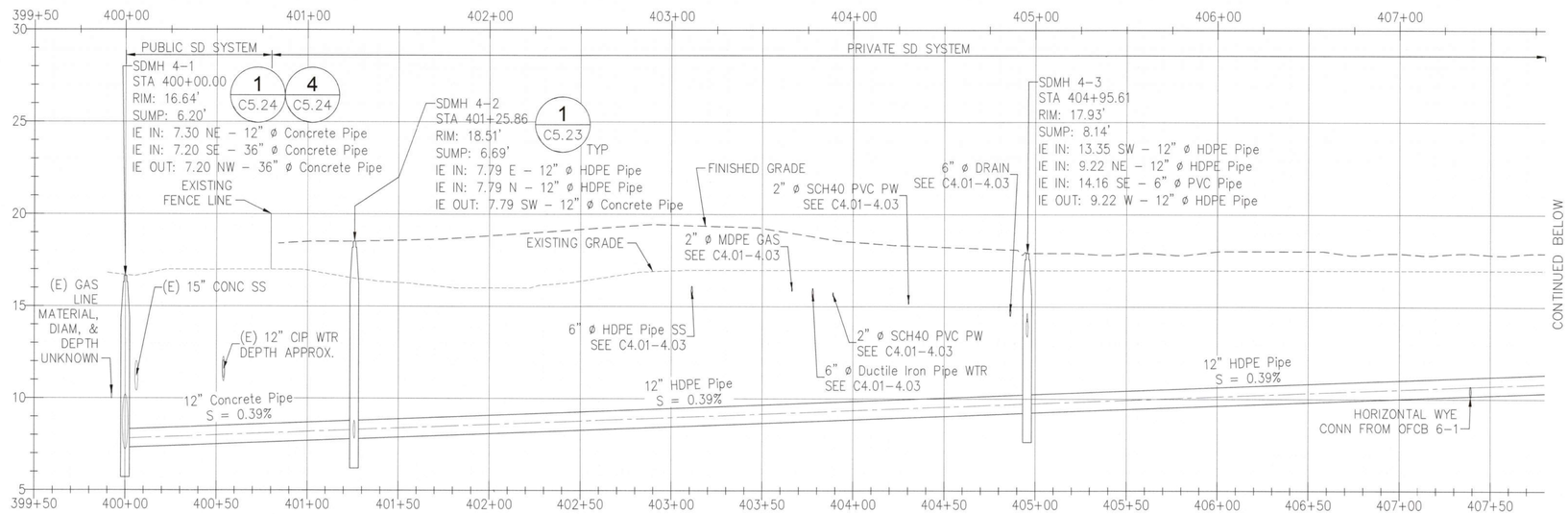


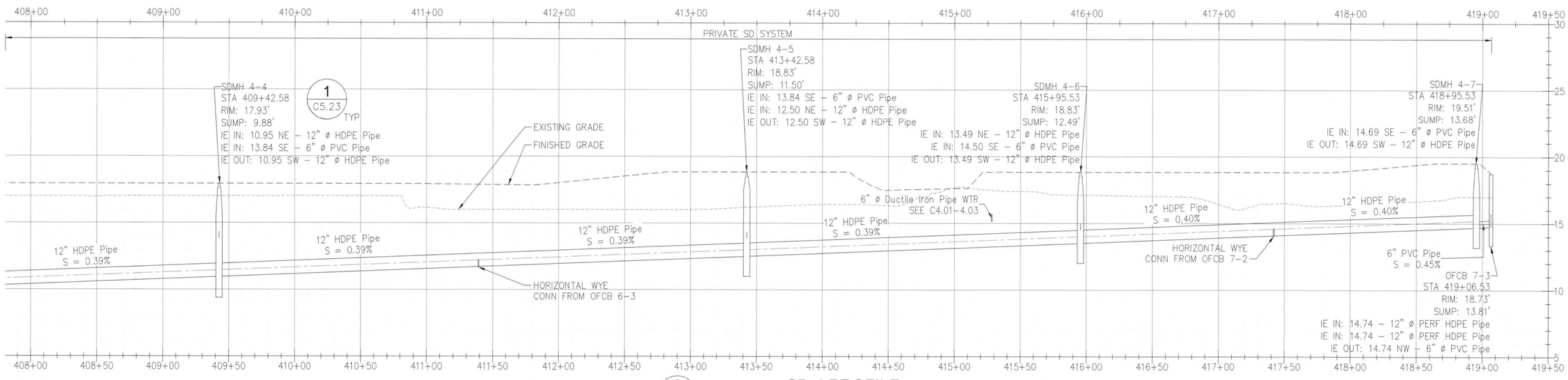
1 / C5.13 **SD-3 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 / C5.13 **SD-4 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 / C5.13 **SD-4 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

4' 0' 4' 8'

VERT. SCALE: 1"=4'-0"

40'-0" 0'-0" 40'-0" 80'-0"

HORIZ. SCALE: 1"=40'-0"

GENERAL NOTES:

1. SDMH 4-1 IS A PUBLIC STORMWATER MANHOLE AND SHALL BE PER DETAILS 1 AND 4 ON C5.24. ALL OTHER STORMWATER MANHOLES ARE PRIVATE STRUCTURES AND SHALL BE PER DETAIL 1 ON C5.23.
2. SEE DETAIL 2 ON C5.23 FOR MANHOLE SIZE AND ORIENTATION OF CONNECTIONS.
3. SEE SHEETS C5.15 AND C5.16 FOR NORTHINGS AND EASTINGS OF OFCB STRUCTURES.
4. SEE SHEETS C5.17 TO C5.20 FOR STRUCTURE INFORMATION (I.E., RIM, STRUCTURE INVERT ELEVATION, AND PIPE INVERT ELEVATIONS) OF OFCB STRUCTURES.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

DRAWING SCALE: AS NOTED

PARCEL:

PHASE: 100%

DAT-HRZ: WAB3-SF

VERT: MLLW 19.39' @ Tide 22 1933

RANGE: 3E SECTION: 27/34

TOWNSHIP: 21N

CONT/CONS: 071908

M. ID: 10124.01

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - PIPELINE PROFILES 02

6688
C5.13
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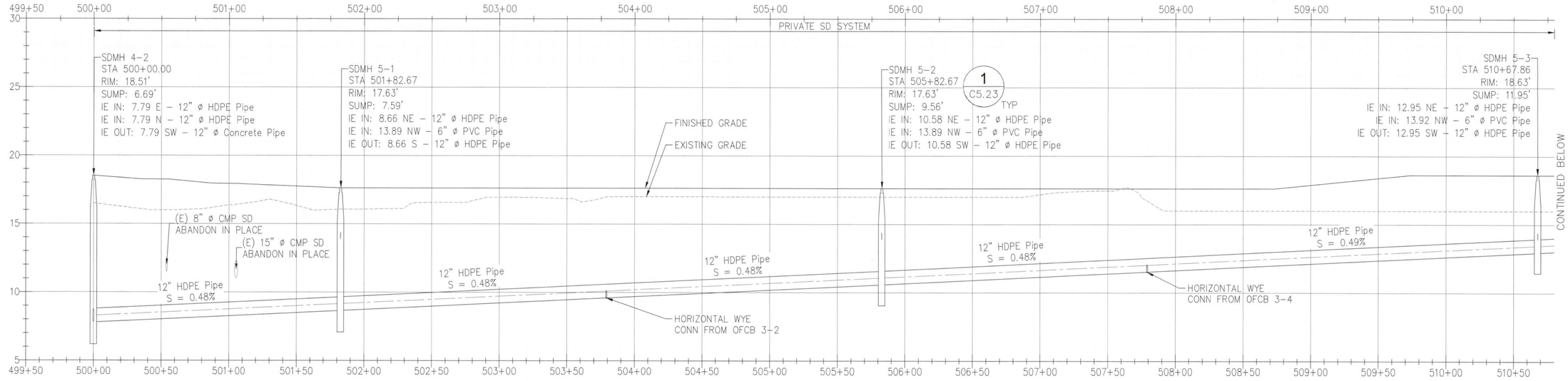
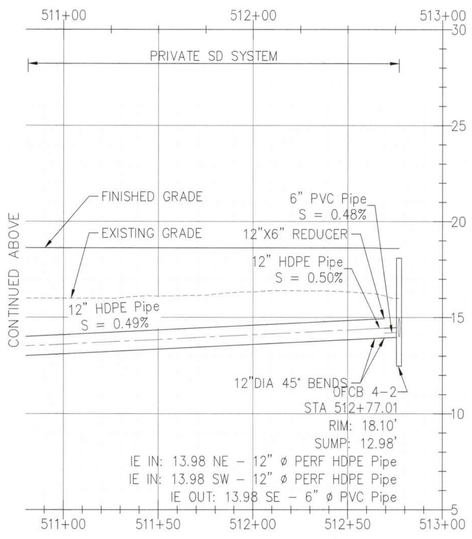


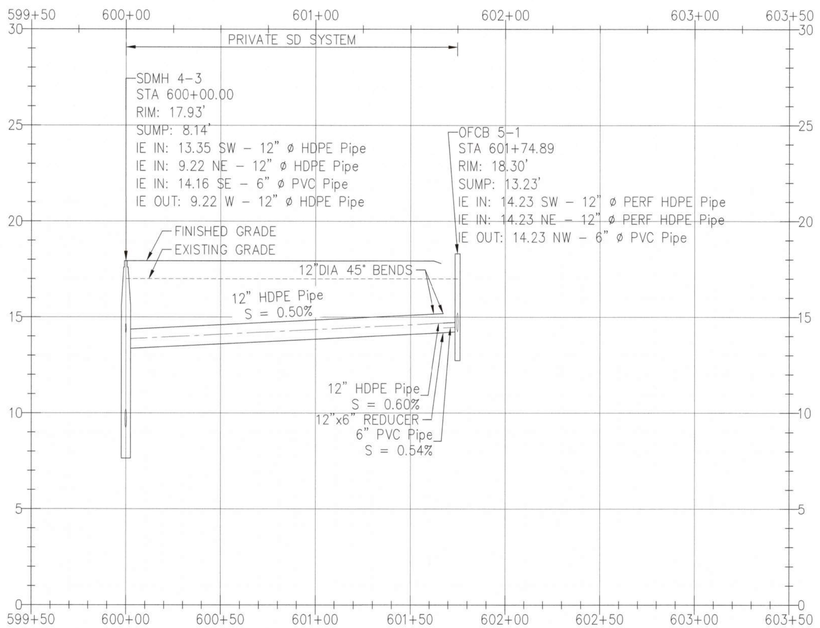
1 C5.14 **SD-5 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



1 C5.14 **SD-5 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 C5.14 **SD-6 PROFILE**

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

GENERAL NOTES:

1. ALL STORMWATER MANHOLES SHOWN ON THIS PAGE ARE PRIVATE STRUCTURES AND SHALL BE PER DETAIL 1 ON C5.23.
2. SEE DETAIL 2 ON C5.23 FOR MANHOLE SIZE AND ORIENTATION OF CONNECTIONS.
3. SEE SHEETS C5.15 AND C5.16 FOR NORTHINGS AND EASTINGS OF OFCB STRUCTURES.
4. SEE SHEETS C5.17 TO C5.20 FOR STRUCTURE INFORMATION (I.E., RIM, STRUCTURE INVERT ELEVATION, AND PIPE INVERT ELEVATIONS) OF OFCB STRUCTURES.

4' 0' 4' 8'

VERT. SCALE: 1"=4'-0"

40'-0" 0'-0" 40'-0" 80'-0"

HORIZ. SCALE: 1"=40'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

EDWARD B. FUENTES — 04.02.25

APPROVED:
DIRECTOR ENG. DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - PIPELINE PROFILES 03

–	CHECKED BY	DATE	
B. FUENTES	PROJ. ENGR	DATE	
PRINTED BY:	SECTION: 27/34	RANGE: 3E	TOWNSHIP: 21N
PORT ADDRESS:ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			
DRAWING SCALE: AS NOTED	VERT: MLLW 19.39' @ Tide 22 1933		DAT-HRZ: WA83-SF
			PARCEL:

6688
C5.14
67 OF 105

CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

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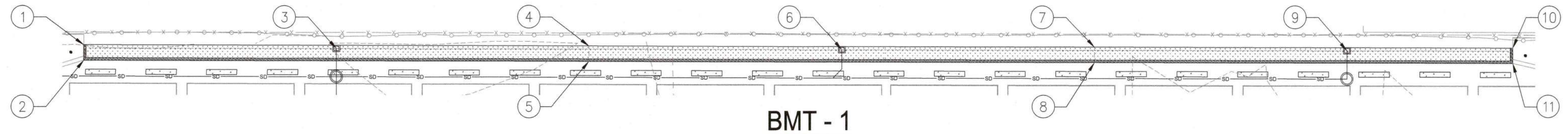
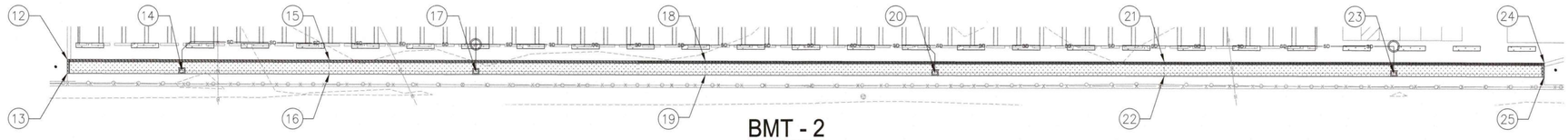
PORT OF TACOMA FILE: C:\bmslkjce-pwd\0130409\1028402-C5.12-14 (STORMWATER PROFILES)

BINDING EDGE



BMT - 1
SCALE: 1" = 30'



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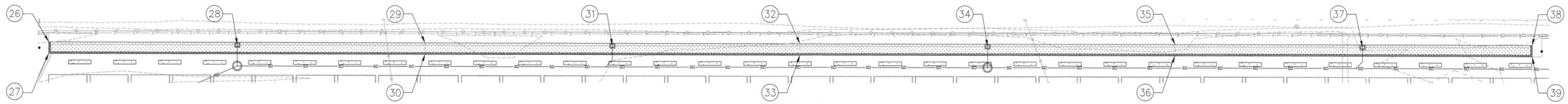
SCALE: 1" = 30'



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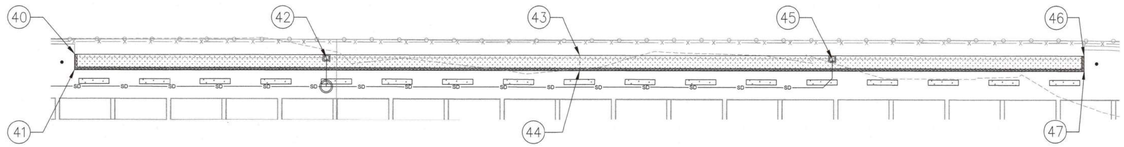
SCALE: 1" = 30'



BMT - 4
SCALE: 1" = 30'

BMT–1 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
1	NW CORNER	709325.99	1167097.99
2	SW CORNER	709321.82	1167102.30
3	OFCB 1–1 UNDERDRAIN LOW POINT	709396.92	1167168.50
4	UNDERDRAIN GRADE BREAK	709469.59	1167237.21
5	UNDERDRAIN GRADE BREAK	709465.41	1167241.52
6	OFCB 1–2 UNDERDRAIN LOW POINT	709540.52	1167307.71
7	UNDERDRAIN GRADE BREAK	709613.18	1167376.42
8	UNDERDRAIN GRADE BREAK	709609.00	1167380.73
9	OFCB 1–3 UNDERDRAIN LOW POINT	709684.11	1167446.93
10	NE CORNER	709732.01	1167491.62
11	SE CORNER	709727.83	1167495.93

BMT–2 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
12	NW CORNER	708978.75	1167344.10
13	SW CORNER	708974.57	1167348.40
14	OFCB 2–1 UNDERDRAIN LOW POINT	709011.34	1167382.31
15	UNDERDRAIN GRADE BREAK	709060.60	1167423.45
16	UNDERDRAIN GRADE BREAK	709056.42	1167427.76
17	OFCB 2–2 UNDERDRAIN LOW POINT	709103.25	1167471.41
18	UNDERDRAIN GRADE BREAK	709178.35	1167537.61
19	UNDERDRAIN GRADE BREAK	709174.17	1167541.92
20	OFCB 2–3 UNDERDRAIN LOW POINT	709246.84	1167610.63
21	UNDERDRAIN GRADE BREAK	709321.94	1167676.82
22	UNDERDRAIN GRADE BREAK	709317.77	1167681.13
23	OFCB 2–4 UNDERDRAIN LOW POINT	709390.43	1167749.84
24	NE CORNER	709440.77	1167792.02
25	SE CORNER	709436.59	1167796.33

BMT–3 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
26	NW CORNER	708921.38	1167396.09
27	SW CORNER	708917.21	1167400.39
28	OFCB 3–1 UNDERDRAIN LOW POINT	708992.67	1167466.94
29	UNDERDRAIN GRADE BREAK	709065.34	1167535.65
30	UNDERDRAIN GRADE BREAK	709061.16	1167539.96
31	OFCB 3–2 UNDERDRAIN LOW POINT	709136.26	1167606.16
32	UNDERDRAIN GRADE BREAK	709208.93	1167674.87
33	UNDERDRAIN GRADE BREAK	709204.75	1167679.17
34	OFCB 3–3 UNDERDRAIN LOW POINT	709279.86	1167745.37
35	UNDERDRAIN GRADE BREAK	709352.52	1167814.08
36	UNDERDRAIN GRADE BREAK	709348.35	1167818.39
37	OFCB 3–4 UNDERDRAIN LOW POINT	709423.45	1167884.59
38	NE CORNER	709489.30	1167946.68
39	SE CORNER	709485.12	1167950.99

BMT–4 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
40	NW CORNER	709557.46	1168012.77
41	SW CORNER	709553.29	1168017.08
42	OFCB 4–1 UNDERDRAIN LOW POINT	709628.23	1168083.09
43	UNDERDRAIN GRADE BREAK	709700.91	1168151.78
44	UNDERDRAIN GRADE BREAK	709696.73	1168156.09
45	OFCB 4–2 UNDERDRAIN LOW POINT	709771.85	1168222.27
46	NE CORNER	709844.35	1168290.80
47	SE CORNER	709840.18	1168295.11

40'–0" 0'–0" 30'–0" 60'–0"

HORIZ. SCALE: 1"=30'–0"

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DATE: 2025-08-25

Port of Tacoma
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BENJAMIN EDWARD FUENTES — 48363 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

APPROVED:
DIRECTOR ENG. DATE 4-23-25

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - TREATMENT PLANS 01

CHECKED BY	–	DATE	
PRINTED BY:	B. FUENTES		
PROJ. ENGR		DATE	
PORT ADDRESS:	ONE SITCUM PLAZA		
	TACOMA, WA 98401–1837		

6688
C5.15
68 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	10124.01	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100%	PARCEL:	DRAWING SCALE: AS NOTED
			SECTION: 27/34

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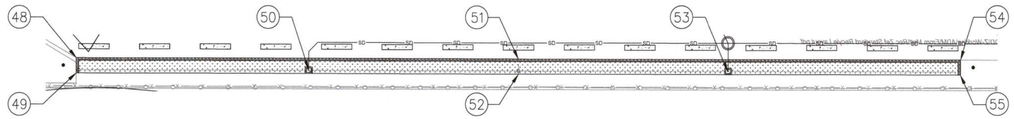
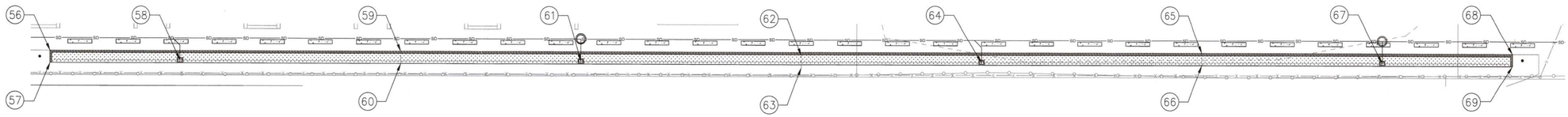
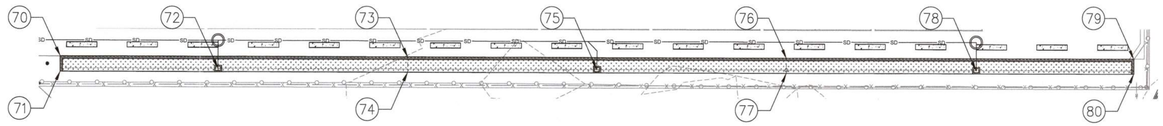


BMT - 5
SCALE: 1" = 30'



BMT - 6
SCALE: 1" = 30'



BMT - 7
SCALE: 1" = 30'

BMT–5 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
48	NW CORNER	708520.97	1167589.38
49	SW CORNER	708516.80	1167593.69
50	OFCB 5–1 UNDERDRAIN LOW POINT	708583.72	1167656.82
51	UNDERDRAIN GRADE BREAK	708646.62	1167711.19
52	UNDERDRAIN GRADE BREAK	708642.44	1167715.50
53	OFCB 5–2 UNDERDRAIN LOW POINT	708702.89	1167772.35
54	NE CORNER	708772.26	1167833.00
55	SE CORNER	708768.09	1167837.31

BMT–6 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
56	NW CORNER	708836.84	1167895.62
57	SW CORNER	708832.67	1167899.92
58	OFCB 6–1 UNDERDRAIN LOW POINT	708880.21	1167944.27
59	UNDERDRAIN GRADE BREAK	708955.31	1168010.47
60	UNDERDRAIN GRADE BREAK	708951.12	1168014.77
61	OFCB 6–2 UNDERDRAIN LOW POINT	709023.80	1168083.49
62	UNDERDRAIN GRADE BREAK	709098.90	1168149.68
63	UNDERDRAIN GRADE BREAK	709094.73	1168153.99
64	OFCB 6–3 UNDERDRAIN LOW POINT	709167.39	1168222.70
65	UNDERDRAIN GRADE BREAK	709242.50	1168288.90
66	UNDERDRAIN GRADE BREAK	709238.32	1168293.20
67	OCFB 6–4 UNDERDRAIN LOW POINT	709310.99	1168361.92
68	NE CORNER	709360.96	1168403.75
69	SE CORNER	709356.79	1168408.06

BMT–7 COORDINATE TABLE			
NO.	DESCRIPTION	N	E
70	NW CORNER	709451.03	1168491.07
71	SW CORNER	709446.86	1168495.38
72	OFCB 7–1 UNDERDRAIN LOW POINT	709492.60	1168537.99
73	UNDERDRAIN GRADE BREAK	709549.75	1168586.78
74	UNDERDRAIN GRADE BREAK	709545.58	1168591.09
75	OFCB 7–2 UNDERDRAIN LOW POINT	709600.29	1168642.40
76	UNDERDRAIN GRADE BREAK	709657.45	1168691.19
77	UNDERDRAIN GRADE BREAK	709653.27	1168695.50
78	OFCB 7–3 UNDERDRAIN LOW POINT	709707.99	1168746.81
79	NE CORNER	709756.17	1168786.90
80	SE CORNER	709751.99	1168791.21

40'–0" 0'–0" 30'–0" 60'–0"

HORIZ. SCALE: 1"=30'–0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 45459 — 04.02.25

APPROVED:
DIRECTOR ENG. DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - TREATMENT PLANS 02

–	CHECKED BY	DATE	
	B. FUENTES		
	PROJ. ENGR	DATE	

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	PRINTED BY:
DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933	PORT ADDRESS: ONE SITCUM PLAZA	
PARCEL:	DRAWING SCALE: AS NOTED	TACOMA, WA 98401–1837	

6688
C5.16
69 OF 105

CONT/CONS: 071908	
M. ID: 10124.01	
PHASE: 100%	

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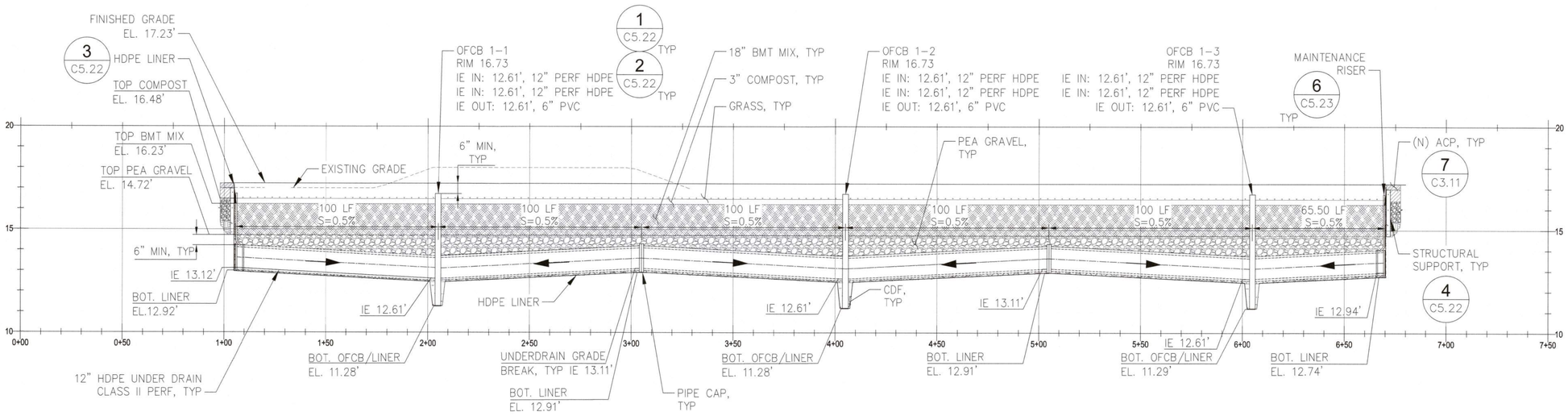
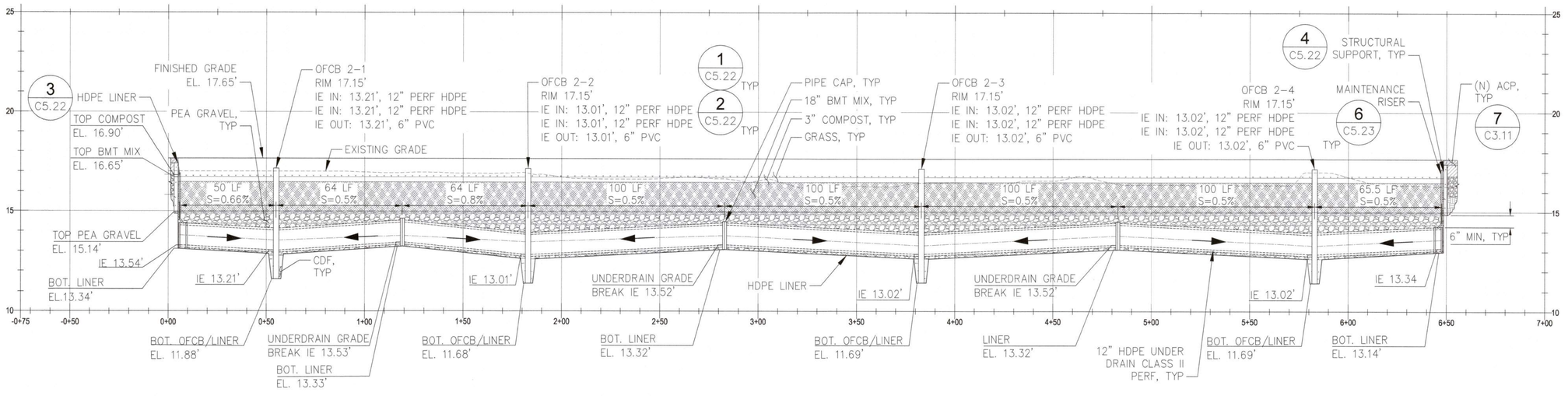


1 C5.08 **BMT-1 SECTION**

SCALE: 1"=30' (HORIZ.) 1"=3' (VERT.)



2 C5.08 **BMT-2 SECTION**

SCALE: 1"=30' (HORIZ.) 1"=3' (VERT.)

3' 0' 3' 6'

VERT. SCALE: 1"=3'-0"

30'-0" 0'-0" 30'-0" 60'-0"

HORIZ. SCALE: 1"=30'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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DIRECTOR ENG. DATE 4-2-25

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PROJ. ENGR	DATE
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	TACOMA, WA 98401-1837

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER TREATMENT SECTIONS 01

TOWNSHIP: 21N	RANGE: 3E
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PARCEL:	DRAWING SCALE: AS NOTED

6688
C5.17
70 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

SECTION: 27/34

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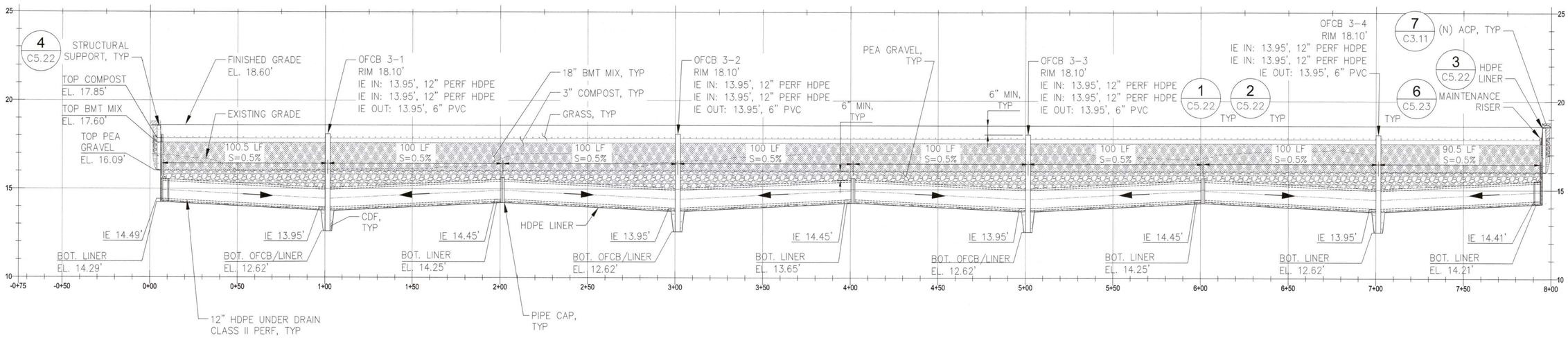

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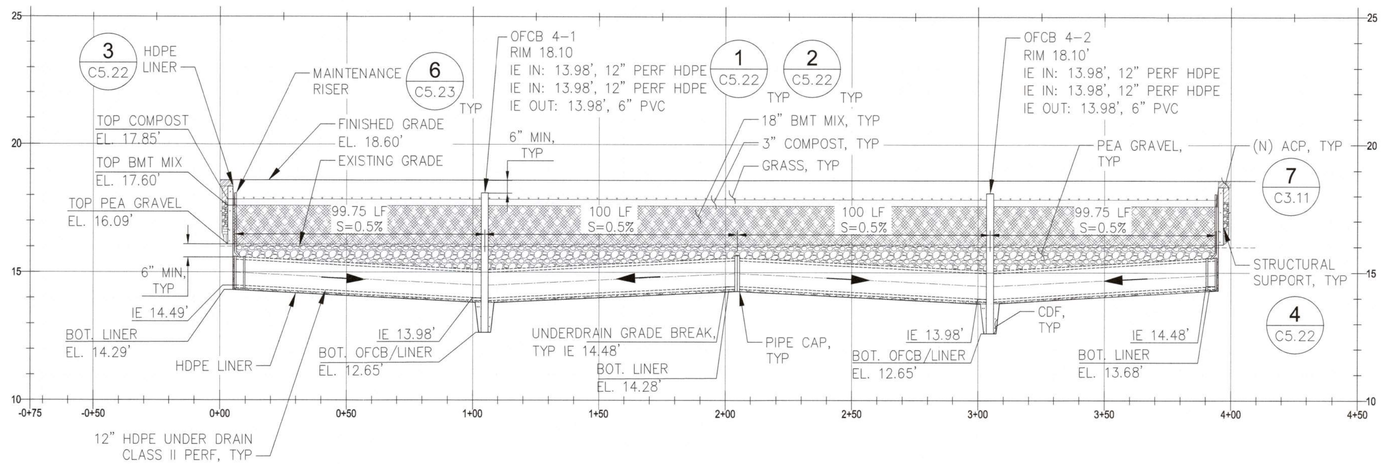

2 C5.08 **BMT-4 SECTION**

SCALE:1"=30' (HORIZ.) 1"=3' (VERT.)

3' 0' 3' 6'
VERT. SCALE: 1"=3'-0"

30'-0" 0'-0" 30'-0" 60'-0"
HORIZ. SCALE: 1"=30'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
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APPROVED:
DIRECTOR ENG. DATE 4-23-25

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER TREATMENT SECTIONS 02

–	CHECKED BY	B. FUENTES	DATE
PRINTED BY:		PROJ. ENGR	
PORT ADDRESS: ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			
DRAWING SCALE: AS NOTED			

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

CONT/CONS: 071908
M. ID: 10124.01
PHASE: 100%

6688
C5.18
71 OF 105

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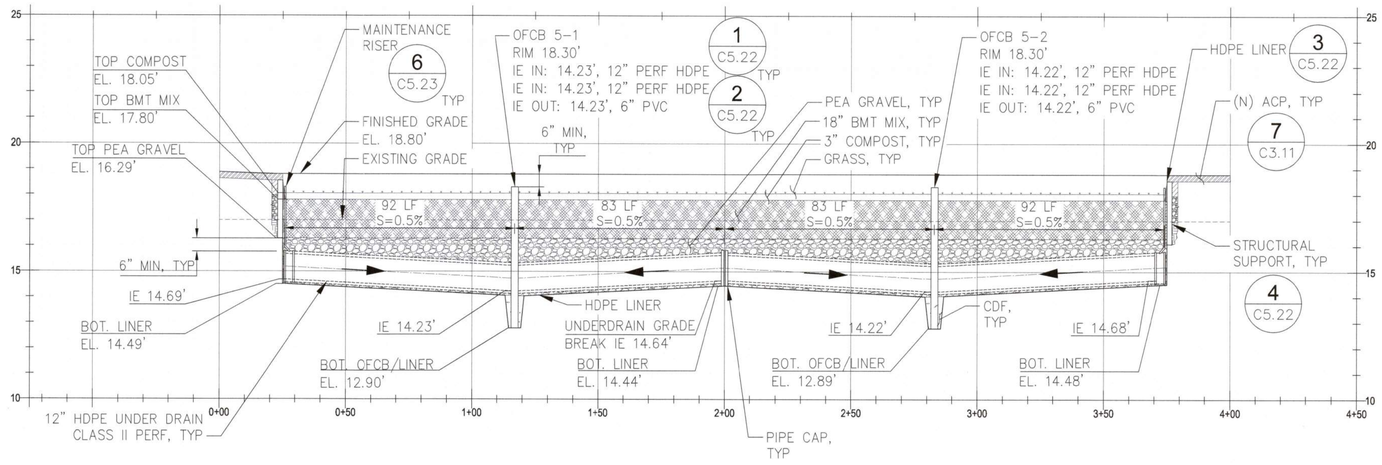
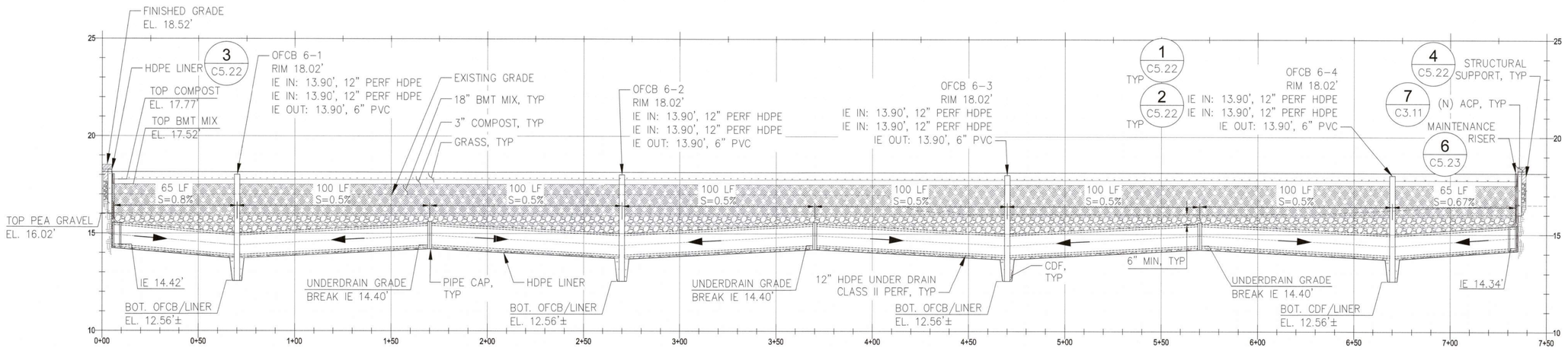


1 C5.08

BMT-5 SECTION

SCALE: 1"=30' (HORIZ.) 1"=3' (VERT.)



2 C5.08

BMT-6 SECTION

SCALE: 1"=30' (HORIZ.) 1"=3' (VERT.)

3' 0' 3' 6'
VERT. SCALE: 1"=3'-0"

30'-0" 0'-0" 30'-0" 60'-0"
HORIZ. SCALE: 1"=30'-0"

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TACOMA, WA 98401-1837

DRAWING SCALE: AS NOTED

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER TREATMENT SECTIONS 03

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:			

6688
C5.19
72 OF 105

CONT/CONS:	071908
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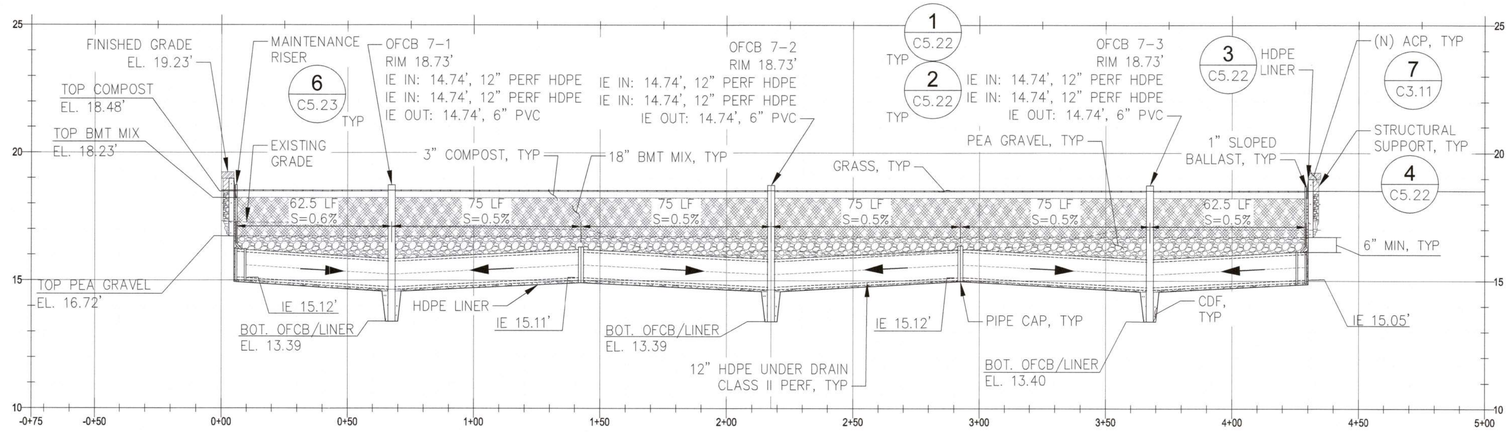

1 C5.08 **BMT-7 SECTION**

SCALE: 1"=30' (HORIZ.) 1"=3' (VERT.)

3' 0' 3' 6'

VERT. SCALE: 1"=3'-0"

30'-0" 0'-0" 30'-0" 60'-0"

HORIZ. SCALE: 1"=30'-0"

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BENJAMIN EDWARD FUENTES — 48503 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

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DIRECTOR ENG. DATE

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THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER - TREATMENT SECTIONS 04

6688
C5.20
73 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100%	PARCEL:	DRAWING SCALE: AS NOTED
		SECTION: 27/34	

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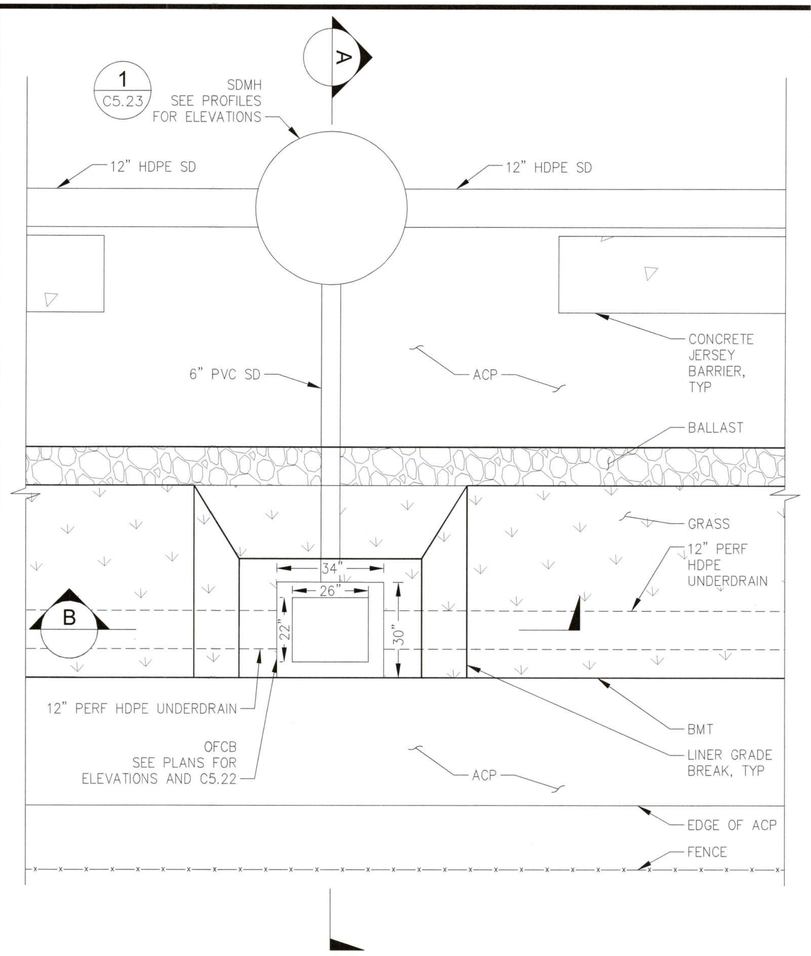
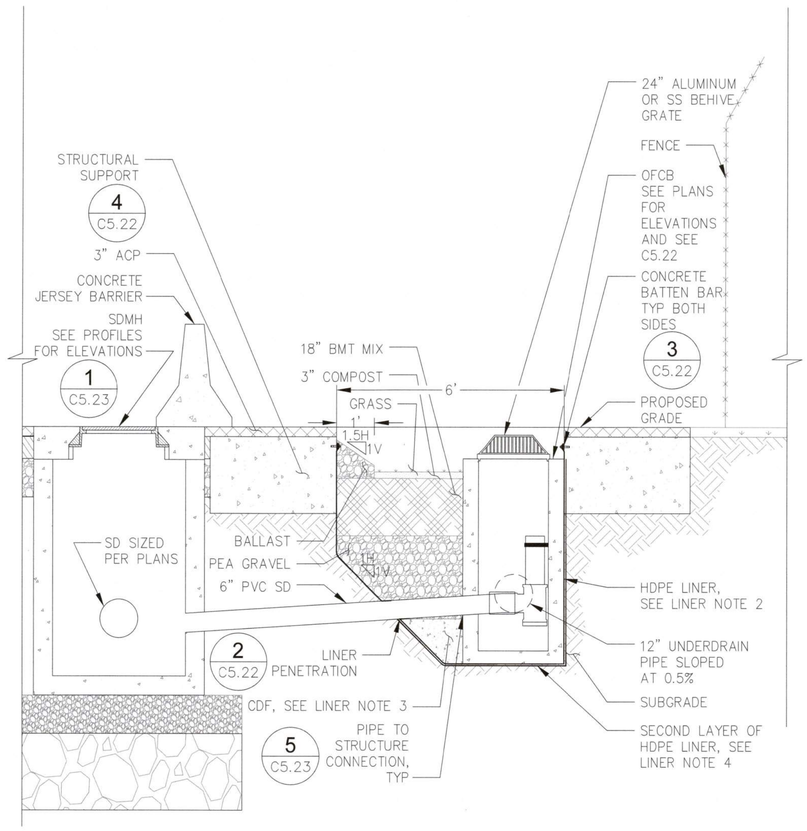
BINDING EDGE

BINDING EDGE



PLAN
SCALE: 1" = 2'



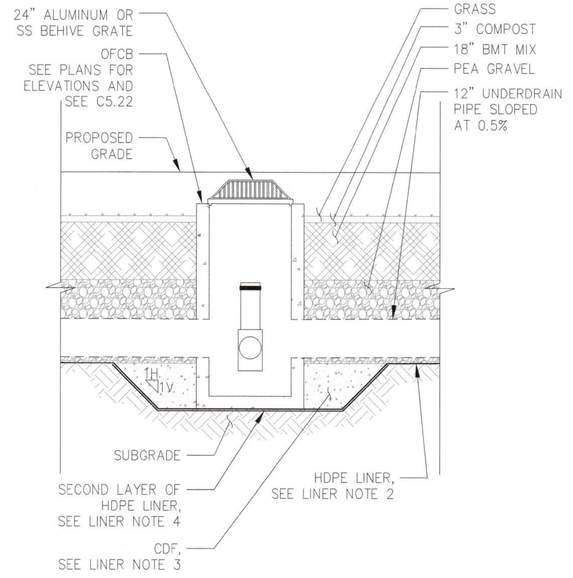
SECTION A-A
SCALE: 1" = 2'

LINER NOTES:

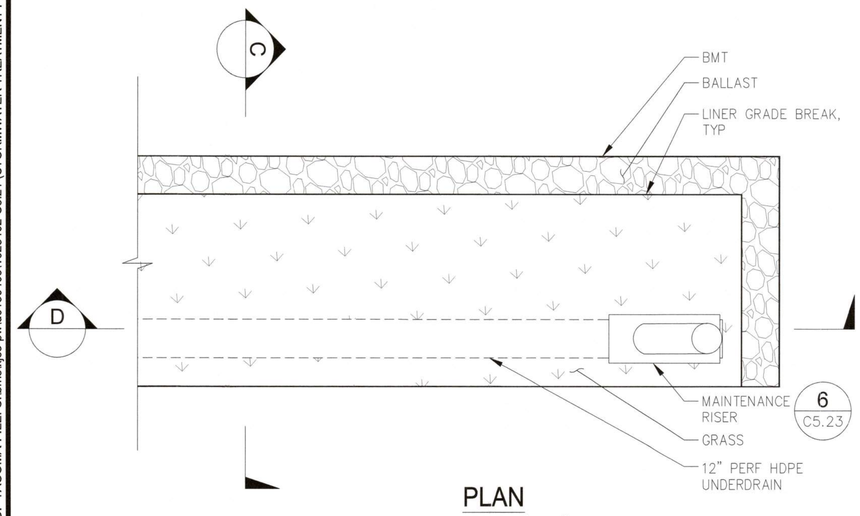
1. ALTERNATIVE HDPE ANCHORING SYSTEMS MAY BE ACCEPTABLE PENDING ENGINEER'S REVIEW AND APPROVAL.
2. INSTALL 16 OZ GEOTEXTILE BELOW AND ABOVE HDPE LINER.
3. THE SUMP SURROUNDING THE OFCB STRUCTURES SHALL BE FILLED WITH CDF.
4. LINER SURFACES IN CONTACT WITH OFCB OR CDF SHALL BE REINFORCED WITH A SECOND LAYER OF 60 MIL HDPE.

IRRIGATION NOTES:

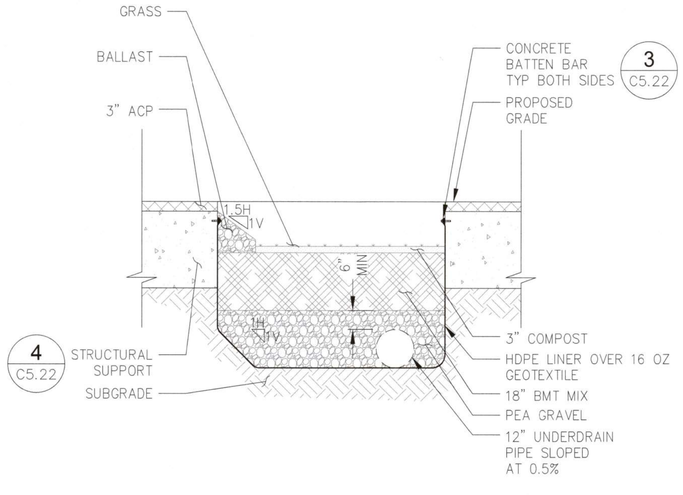
1. CONTRACTOR SHALL DESIGN, CONSTRUCT, AND OPERATE TEMPORARY IRRIGATION SYSTEMS TO PROVIDE FULL COVERAGE FOR EACH BMT CELL.
2. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO CONFIRM WATER SOURCE PRIOR TO DESIGNING THE IRRIGATION SYSTEMS.
3. IRRIGATION SYSTEM SHALL BE OPERATED AFTER THE BMT CELLS HAVE BEEN CONSTRUCTED AND UNTIL FINAL COMPLETION OF PROJECT.
4. IRRIGATION SYSTEM OPERATION SHALL BE TRANSFERRED OVER TO THE OWNER AT FINAL COMPLETION OF PROJECT.



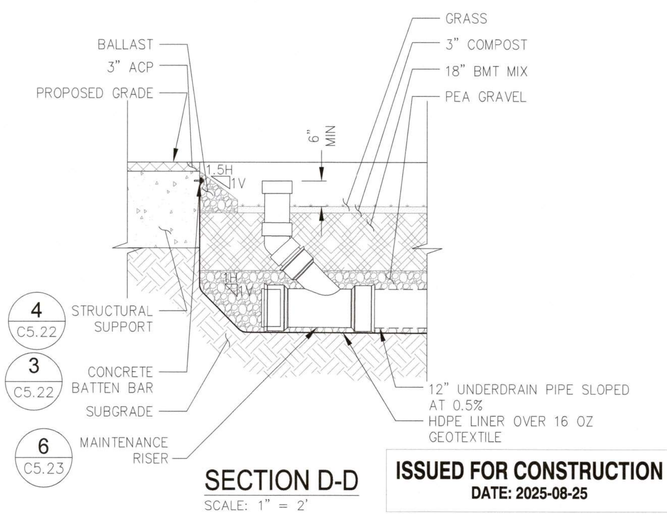
SECTION B-B
SCALE: 1" = 2'



PLAN
SCALE: 1" = 2'



SECTION C-C
SCALE: 1" = 2'



SECTION D-D
SCALE: 1" = 2'

ISSUED FOR CONSTRUCTION
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Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

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BENJAMIN EDWARD FUENTES — 48353 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 04.02.25

	CHECKED BY	DATE
–	B. FUENTES	
	PROJ. ENGR	DATE

APPROVED:
DIRECTOR ENG. DATE

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
STORMWATER TREATMENT DETAILS

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34
M. ID: 10124.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	PRINTED BY:
PHASE: 100%	PARCEL:	DRAWING SCALE: AS NOTED	PORT ADDRESS:ONE SITCUM PLAZA TACOMA, WA 98401-1837

6688
C5.21
74 OF 105

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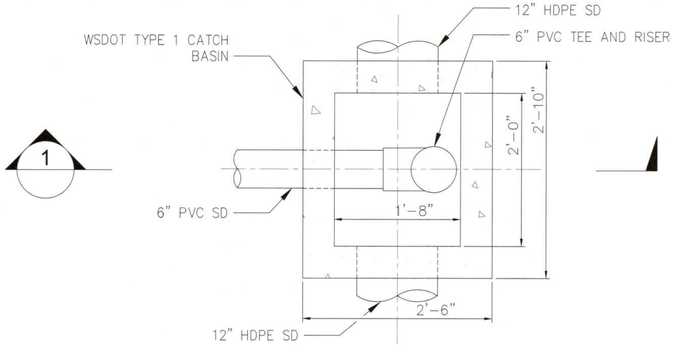
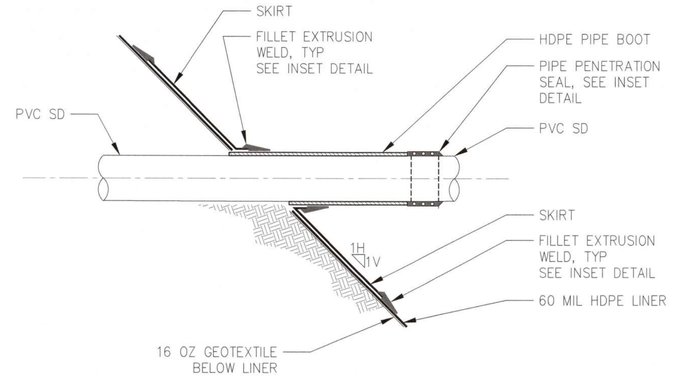
PORT OF TACOMA FILE: C:\bms\kjcs-pw\d01304091\1028402-C5.21 (STORMWATER TREATMENT PLAN AND SECTION)

BINDING EDGE



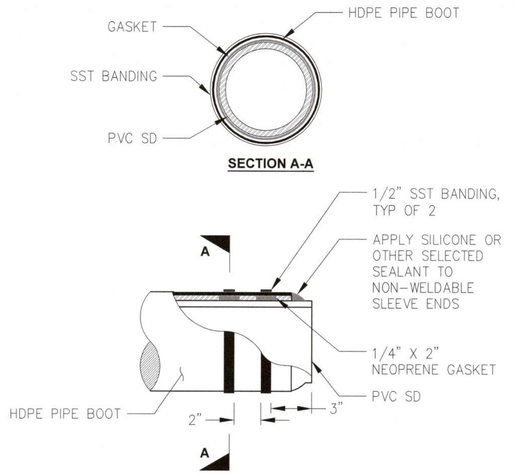
PLAN
SCALE: 1" = 1'



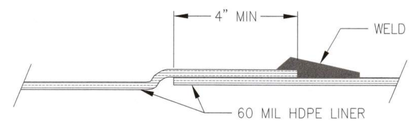
NOTES:

1. PIPE BOOT INSTALLATION, INCLUDING ALL WELDS AND SEALS, SHALL BE TESTED TO CONFIRM LEAK-FREE INSTALLATION.
2. EXTRUSION WELDS SHALL CONFORM TO LINER SYSTEM DETAILS AND SPECIFICATIONS. INCORPORATE COPPER WIRE IN EXTRUSION WELDS TO ALLOW FOR SPARK TESTING.
3. LINER PENETRATION HOLE SHALL BE CUT UNDERSIZED SO THAT STRETCHED LINER FORMS A 1" FLANGE OVER THE PIPE.

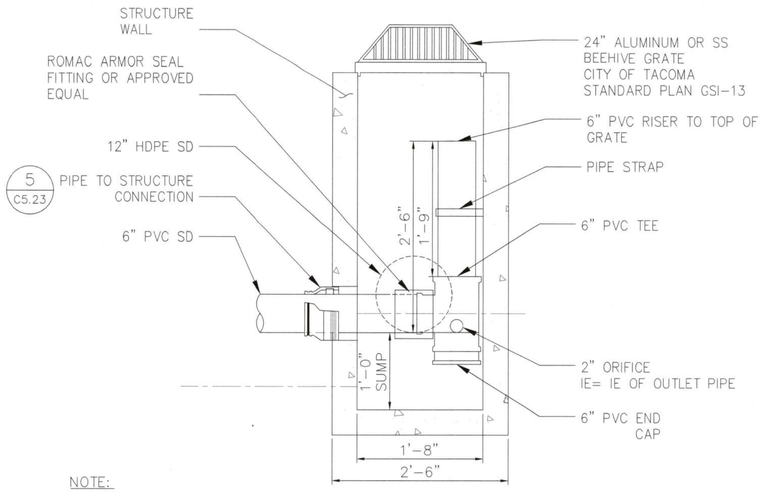
2 HDPE LINER PENETRATION DETAILS
SCALE: NTS



PIPE PENETRATION SEAL
NTS



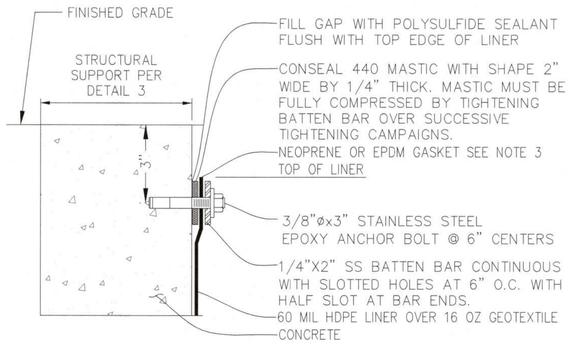
FILLET EXTRUSION WELD
NTS



NOTE:

1. FLOW CONTROL STANDPIPES INCLUDE AN ORIFICE SIZED TO DETAIN BMT DISCHARGES FOR INCREASED TREATMENT EFFECTIVENESS.

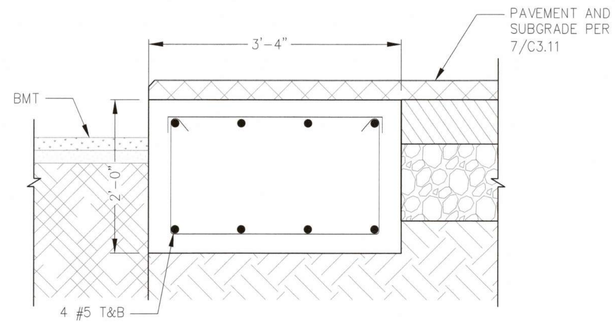
1 RISER DETAIL
SCALE: NTS



NOTES:

1. CLEAN AND PREP CONCRETE TO ASSURE SMOOTH SURFACE PRIOR TO INSTALL.
2. USE FOR RING WALLS AND OTHER VERTICAL SURFACES. WHERE BATTEN BARS ENDS MEET INSTALL ANCHOR BOLT CENTERED ON BUTT-JOINT SUCH THAT WASHERS PROVIDES COMPRESSION ON BOTH SIDES OF THE JOINT, OR SUCH THAT THERE IS A MAXIMUM 1" FROM END OF BAR TO BOLT. ANCHOR BOLTS SHALL BE EPOXIED A MINIMUM OF 3" INTO CONCRETE. NUTS SHALL BE SS.
3. ADD A 1/4"X2" SOLID NEOPRENE OR EPDM CUSHION GASKET WITH A DUROMETER RATING BETWEEN 25 AND 40 BETWEEN THE GEOMEMBRANE AND SS BATTEN TO PROVIDE UNIFORM PRESSURE TO THE GEOMEMBRANE. BUTT JOINTS TO BE EXPERTLY CUT ON AN ANGLE. GEOMEMBRANE SEAMS BELOW THE BATTEN TO BE GROUND SMOOTH.

3 CONCRETE BATTEN BAR
SCALE: NTS



4 BMT STRUCTURAL SUPPORT DETAIL
SCALE: 1" = 1'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

moffatt & nichol

MARK:	REVISION:	BY:	APPR:	DATE:

EDWARD A. FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 43630 — 04.02.25

CHECKED BY	DATE
B. FUENTES	
PROJ. ENGR	DATE

APPROVED:
DIRECTOR' ENG. DATE:

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
BMT DETAILS

PRINTED BY:		SECTION: 27/34	RANGE: 3E
PORT ADDRESS:	ONE SITCUM PLAZA TACOMA, WA 98401-1837	VERT:	MLLW 19.39' @ Tide 22 1933
DRAWING SCALE:	AS NOTED	PARCEL:	

6688
C5.22
75 OF 105

CONT/CONS:	071908
M. ID:	10124.01
PHASE:	100%

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PORT OF TACOMA FILE: C:\bmsl\jce-pw\d0130409\1028402-C5.22 BMT DETAILS

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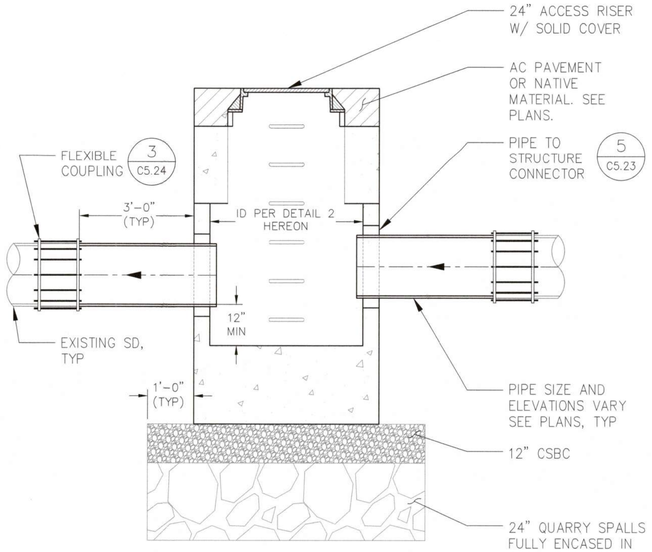
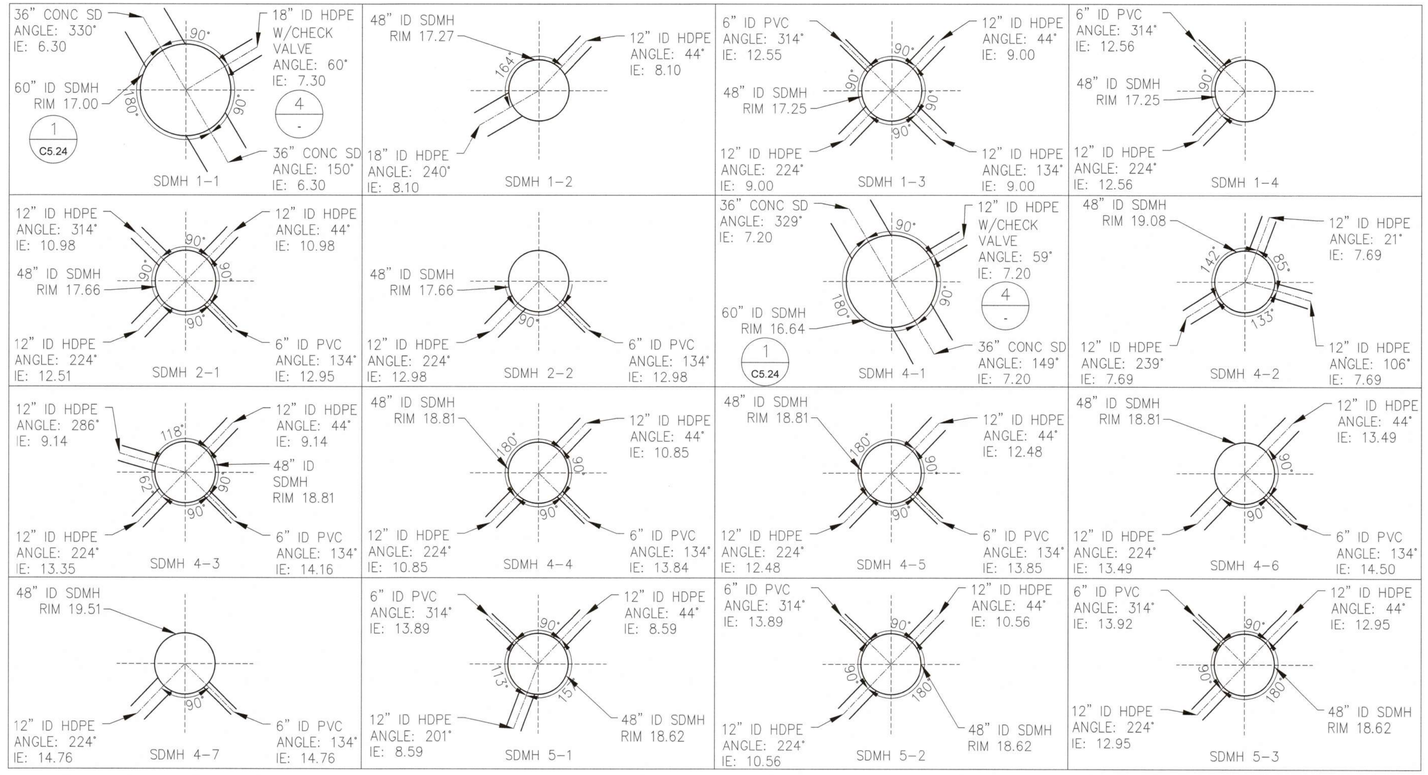


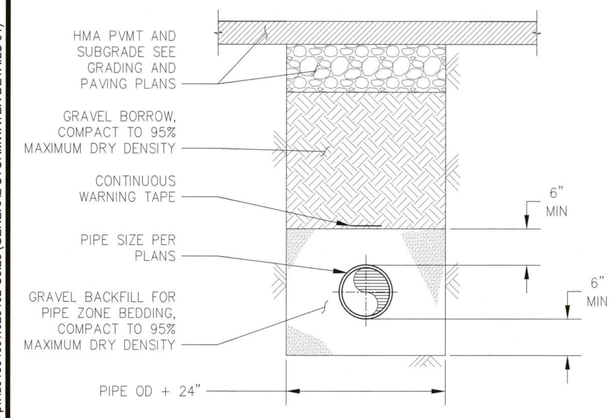
NOTES:

1. CIRCULAR, SOLID LID SHALL BE USED FOR ALL MANHOLES.
2. SDMH 1–1 AND SDMH 4–1 SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STD PLAN SU–17. ASSOCIATED FRAMES AND COVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STD PLAN SU–22.
3. SEE DETAIL 2 ON THIS SHEET FOR PLAN VIEW SCHEMATICS FOR EACH MANHOLE.
4. ALL CATCH BASINS AND MANHOLES SHALL BE MARKED WITH A STENCIL OR MARKER INDICATING THAT NO DUMPING IS ALLOWED AND THE STRUCTURE DISCHARGES TO STREAM OR WATERWAY.

1 – TYPICAL PRIVATE MANHOLE SECTION
SCALE: NTS

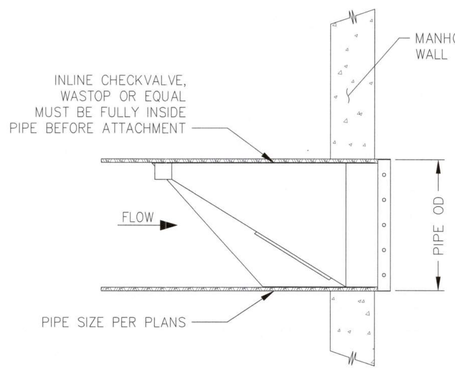


2 – MANHOLE DETAILS
SCALE: 1" = 5'

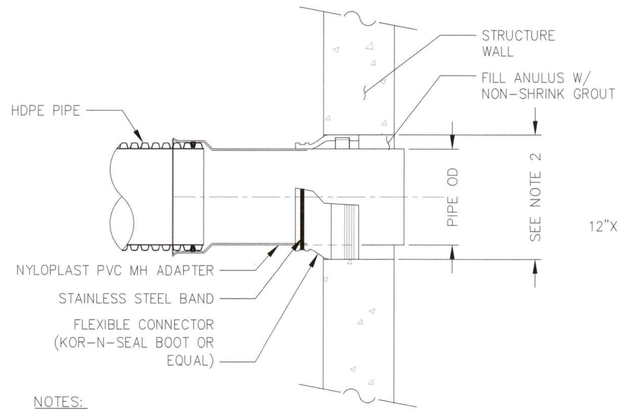


NOTE:
1. FOR PIPING INSTALLED WITHIN CITY ROW, CONTRACTOR SHALL CONSTRUCT TRENCH IN ACCORDANCE WITH CITY STD PLAN SU–16 AND RESURFACE IN ACCORDANCE WITH THE APPLICABLE CITY STD PLAN SU–14.

3 – PIPE TRENCH DETAIL
SCALE: NTS

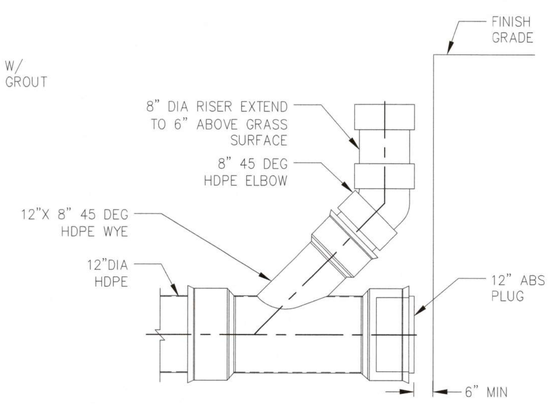


4 – CHECK VALVE DETAIL
NTS



NOTES:
1. CONTRACTOR SHALL CONNECT PIPES TO FLEXIBLE CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY MANHOLE CORE DIMENSIONS WITH MANUFACTURER.
3. CONTRACTOR SHALL PROVIDE SMOOTH WALL ADAPTER OR EQUAL WHEN CONNECTING HDPE PIPE TO MANHOLE.
4. PVC PIPE CAN BE CONNECTED DIRECTLY TO THE FLEXIBLE CONNECTOR WITHOUT AN ADAPTER.

5 – PIPE TO STRUCTURE CONNECTION DETAIL
SCALE: NTS



6 – MAINTENANCE RISER CONNECTION
SCALE: 1" = 1/2"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 48353 — 04.02.25

–	CHECKED BY	DATE
	B. FUENTES	
	PROJ. ENGR	DATE

APPROVED:
DIRECTOR ENG. DATE

PRINTED BY:
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
GENERAL STORMWATER DETAILS 01

TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34	
DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL:	DRAWING SCALE: AS NOTED		

6688
C5.23
76 OF 105

CONT/CONS: 071908	
M. ID: 10124.01	
PHASE: 100%	

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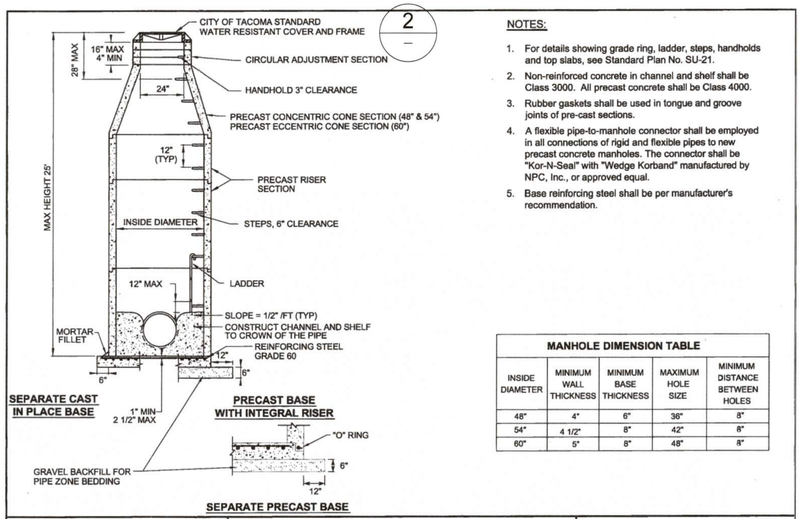


2

NOTES:

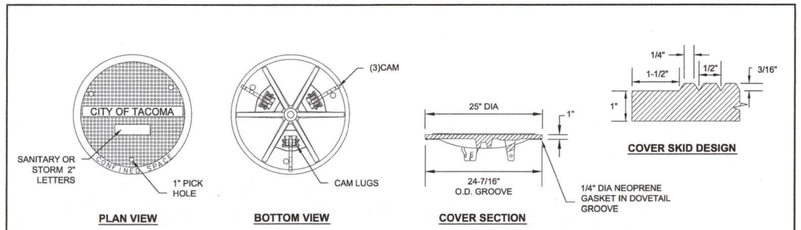
1. For details showing grade ring, ladder, steps, handholds and top slabs, see Standard Plan No. SU-21.
2. Non-reinforced concrete in channel and shelf shall be Class 3000. All precast concrete shall be Class 4000.
3. Rubber gaskets shall be used in tongue and groove joints of pre-cast sections.
4. A flexible pipe-to-manhole connector shall be employed in all connections of rigid and flexible pipes to new precast concrete manholes. The connector shall be "Kor-N-Seal" with "Wedge Korband" manufactured by NPC, Inc., or approved equal.
5. Base reinforcing steel shall be per manufacturer's recommendation.

MANHOLE DIMENSION TABLE

INSIDE DIAMETER	MINIMUM WALL THICKNESS	MINIMUM BASE THICKNESS	MAXIMUM HOLE SIZE	MINIMUM DISTANCE BETWEEN HOLES
48"	4"	6"	36"	8"
54"	4 1/2"	8"	42"	8"
60"	5"	8"	48"	8"

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	MANHOLE-TYPE 1 48", 54" AND 60"
	CITY ENGINEER _____ DATE 1/17/24	STANDARD PLAN NO. SU-17

1 — MANHOLE TYPE 1 (SU-17)
SCALE: NTS

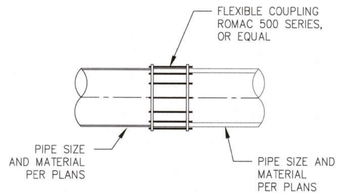


NOTES:

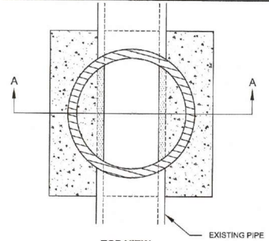
1. Covers shall have the word "SANITARY" in 2 inch raised letters when used with sanitary sewer installations, or "STORM" when installed with storm sewers. All covers shall have the words "CITY OF TACOMA" in 1-1/2 inch raised letters and the words "CONFINED SPACE" in 1-inch raised letters.
2. Lids must be interchangeable, any lid shall fit any and all frames.
3. Frame and cover shall be designed for H-20 loading.
4. Frame shall be grey-iron conforming to the requirements of AASHTO M 105, grade 30B.
5. Covers shall be ductile iron conforming to ASTM A 536, grade 80-55-06.
6. Per WSDOT Standard Specification 9-05.15, metal castings shall not be dipped, painted, welded, plugged, or repaired.

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	MANHOLE FRAME AND COVER
	CITY ENGINEER _____ DATE 1/17/24	STANDARD PLAN NO. SU-22

2 — MANHOLE FRAME AND COVER (SU-22)
SCALE: NTS

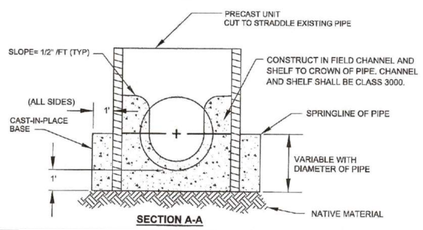


3 — FLEXIBLE COUPLING DETAIL
SCALE: NTS



NOTES:

1. Existing pipe shall be supported at all times.
2. No weight of the precast unit shall bear on the existing pipe.
3. Concrete for cast-in-place base shall be Class 4000.
4. Cast-in-place base shall be poured to encase the precast unit.
5. Precast manhole section shall be installed in accordance with the Standard Plan for the specified manhole size and type.
6. Additional manhole sections shall not be installed until concrete base has set for 12 hours.
7. The existing main shall be left in place and the top portion of the main shall be removed. The bottom portion shall be tied in as the channel of the new manhole.
8. Grout all openings to ensure water tight structure.



CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	CAST-IN-PLACE MANHOLE BASE
	CITY ENGINEER James Rodney 12 Jun 2009 DATE	STANDARD PLAN NO. SU-20

4 — CAST-IN-PLACE MANHOLE BASE (SU-20)
SCALE: NTS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

Kennedy Jenks

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MARK:	REVISION:	BY:	APPR:	DATE:

BENJAMIN EDWARD FUENTES — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 48457 — 04.02.25

APPROVED: _____ DIRECTOR ENG. DATE 9-3-25

THORNE OFF DOCK CONTAINER YARD
THORNE ROAD
GENERAL STORMWATER DETAILS 02

–	CHECKED BY	DATE	
	B. FUENTES		
	PROJ. ENGR	DATE	
PRINTED BY:			
PORT ADDRESS: ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			

6688	TOWNSHIP: 21N	RANGE: 3E	SECTION: 27/34
C5.24	VERT: MLLW 19.39' @ Tide 22 1933		
77 OF 105	DRAWING SCALE: AS NOTED		
CONT/CONS: 071908	DAT-HRZ: WA83-SF		
M. ID: 10124.01	PARCEL:		
PHASE: 100%			

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BINDING EDGE

GENERAL NOTES:

1. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO CIVIL AND STRUCTURAL DRAWINGS TO COORDINATE THE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENT, STRUCTURES, VAULTS, CONDUITS, ETC. NOTIFY ENGINEER IN THE EVENT OF A CONFLICT.

2. SEE DRAWING E8.0 AND E8.1 FOR CONDUIT AND CONDUCTOR SCHEDULE. NOT ALL CONDUIT AND CONDUCTORS ARE INDICATED ON THE SCHEDULES. SEE SITE PLANS AND DETAILS FOR ADDITIONAL CONDUIT AND CONDUCTOR REQUIREMENTS. METALLIC CONDUITS, COUPLINGS AND JOINTS OF METALLIC CONDUITS EMBEDDED IN CONCRETE, CDF, EARTH OR ASPHALT SHALL BE 1/2 LAP TAPED OR OTHERWISE MADE WATERTIGHT TO PREVENT INTRUSION OF MORTAR, WATER OR OTHER MATERIALS. TEST CONDUIT FOR ABSENCE OF ANY BLOCKAGE PRIOR TO AND WITHIN 24 HOURS OF COMPLETING A CONCRETE OR CDF POUR OR ASPHALT PAVING. ALL METAL CONDUIT EXPOSED ABOVE GRADE SHALL BE PVC COATED OR PRIMED AND PAINTED TWO(2) COATS BLACK OVER GALVANIZE.

3. CONTRACTOR SHALL INCLUDE IN THE BID ALL COSTS TO HAVE A DEPARTMENT OF LABOR AND INDUSTRIES APPROVED FIRM TO FIELD EVALUATE THE INSTALLATION, SAFETY, AND COMPLIANCE REQUIRED PER TACOMA POWER ELECTRICAL INSPECTION AND/OR PER WAC 296-46B-901 FOR ANY EQUIPMENT SPECIFIED OR FURNISHED NOT UL LABELED.

4. THERE IS ADDITIONAL ELECTRICAL WORK SHOWN ON THE CIVIL AND STRUCTURAL DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. EXTENSIVE COORDINATION IS REQUIRED BY THE CONTRACTOR WITH GOVERNING AUTHORITIES, OTHER CONTRACTORS WORKING ON SITE AND POT. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATION SECTIONS AND INCLUDE COSTS FOR ALL COORDINATION AND RELATED WORK IN THE BID.

5. EXCAVATIONS IN EXISTING ASPHALT AREAS FOR POWER AND COMMUNICATIONS WORK. THE CONTRACTOR SHALL SAWCUT, EXCAVATE, HAND DIG, BACKFILL, COMPACT AND PATCH ASPHALT PER THE SPECIFICATIONS. LIMITS OF PAVEMENT DEMOLITION AND RESTORATION SHALL BE AS REQUIRED BY CIVIL AND TO SAFELY PERFORM THE POWER AND COMMUNICATIONS INSTALLATIONS. PAVEMENT PATCHING SHALL BE PER CIVIL/ STRUCTURAL REQUIREMENTS.

6. SEE CIVIL DRAWINGS FOR SITE EQUIPMENT DEMOLITION, EXISTING AND NEW BELOW GRADE UTILITIES. CONTRACTOR SHALL FIELD COORDINATE EXISTING UTILITIES, UNDERGROUND WORK BY OTHER CONTRACTORS WITH ROUTING OF NEW ELECTRICAL UNDERGROUND INFRASTRUCTURE. CALL FOR, IDENTIFY AND MAINTAIN EXISTING UTILITY LOCATES PRIOR TO ANY EXCAVATIONS.

7. CONTRACTOR SHALL PROVIDE PULL TAPE IN ALL CONDUIT RUNS WITH CONDUCTORS, COMMUNICATIONS CABLES OR EMPTY. PROVIDE COMPLETE LOOP OF ALL POWER AND COMMUNICATIONS CABLES AROUND ALL FOUR(4) WALLS OF VAULTS PRIOR TO CABLE EXITING VAULT. FOR POWER CONDUCTORS UPSIZED TO REDUCE VOLTAGE DROP AND LARGER THAN TERMINATION LUGS CONTRACTOR SHALL PROVIDE TERMINAL PINS (FINGER SPLICES) TO ACCOMMODATE TERMINATION.

8. THIS SITE WILL BE SERVED BY TACOMA PUBLIC UTILITIES (TPU). CONTRACTOR SHALL COORDINATE NEW SERVICE WORK WITH TPU (DAN RED (253) 502-8292), SCHEDULE PRE-CONSTRUCTION SITE MEETING AND INCLUDE OWNER WORK REQUIREMENTS IDENTIFIED IN TPU LETTER OF AGREEMENT, APPROVED TPU CONSTRUCTION DRAWINGS AND PER TPU STANDARDS AND REQUIREMENTS.

SYMBOLS LEGEND:

XXXX — BURIED POWER/ COMMUNICATIONS CONDUITS IN SHARED TRENCH. SEE CONDUIT AND WIRE SCHEDULE SHEET E80, E81.

PV / CV — POWER VAULT(PV) AND COMMUNICATION VAULT(CV), 125KIP RATING. SEE VAULT SCHEDULE SHEET EXX.

ELECTRICAL POWER PANEL.

DUPLEX 120V, 20A. WP = GFI RECEPTACLE IN NEMA 3R CAST BOX WITH "IN USE" NEMA 3R COVER.

GROUND PER NEC

EQUIPMENT CONNECTION. PROVIDE PER NEC AND MANUFACTURER'S REQUIREMENTS AND/OR RECOMMENDATIONS.

J — CAST JUNCTION BOX

YLPX — WOOD YARD LIGHTING POLE WITH MULTIPLE LED LIGHT FIXTURES, UNIT SUB POWER, COMMUNICATION AND SECURITY CABINETS. SUBSCRIPT YLPX IDENTIFIES POLE #.

LPX — STEEL AREA LIGHT POLE WITH DUAL LED LIGHT FIXTURES. SUBSCRIPT LPX IDENTIFIES POLE #.

XXX — AVAILABLE FAULT CURRENT.

A / B — DETAIL/SECTION IDENTIFICATION: A = DETAIL/SECTION LETTER, B = SHEET NUMBER WHERE DETAIL/SECTION IS TAKEN FROM OR DRAWN.

RBX — REEFER BUNKER. SEE SHEET E50

RPX — REEFER PEDESTAL. SEE SHEETS E51E54.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	LAMPS	WATTS	MOUNTING
L1	TRULY GREEN SPL2-750-40-H-D-NEMA X-70CRI-SPL2-LG	LED	750	TENON
L2	LITHONIA DSXF1-LED-P1-40L-WFL-MVOLT-IS-PE-UBV-VGDDBXD	LED	21	TENON
P1	LITHONIA RSQ-12-4B-T25-DDBXD-TP	N/A	N/A	POLE WITH CONCRETE BASE
P2	LITHONIA RSQ-8-4B-T25-DDBXD-TP	N/A	N/A	POLE WITH CONCRETE BASE

ABBREVIATION LEGEND:

A	=	AMPS
AFG	=	ABOVE FINISHED GRADE
AIC	=	FAULT CURRENT RATING
BP	=	EXISTING BURIED POWER
BPO	=	EXISTING BURIED FIBER
C	=	COMMUNICATIONS
CDF	=	CONTROLLED DENSITY FILL
CKT	=	CIRCUIT
CO	=	CONDUIT ONLY
CV	=	COMMUNICATIONS VAULT
EX	=	EXISTING
FOB	=	FIBER OPTIC
FT	=	FEET
GRD	=	GROUND
HMA	=	HOT MIX ASPHALT
ID	=	IDENTIFICATION
MIN	=	MINIMUM
N	=	NEW
NEC	=	NATIONAL ELECTRICAL CODE
NEMA	=	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	=	NOT IN CONTRACT
PV	=	POWER VAULT
POT	=	PORT OF TACOMA ENGINEER
POTM	=	PORT OF TACOMA FACILITIES MAINENANCE
POTIT	=	PORT OF TACOMA INFORMATION TECHNOLOGY DEPARTMENT
PVCRS	=	PVC COATED RIGID STEEL CONDUIT
RBX	=	REEFER BUNKER, X = NUMBER IDENTIFICATION
RPX	=	REEFER PEDESTAL, X = NUMBER IDENTIFICATION
SD	=	SECONDARY 600V DISTRIBUTION
SC	=	SECURITY CAMERAS
SDV	=	SECONDARY POWER VAULT
SL	=	SITE LIGHTING
SP	=	SPARE CONDUIT
TPU	=	TACOMA PUBLIC UTILITIES
TPUV	=	TACOMA PUBLIC UTILITIES VAULT
W	=	WITH
WAC	=	WASHINGTON ADMINISTRATIVE CODE
WP	=	WEATHERPROOF
WPC	=	WHERE-PORT COMMUNICATIONS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
820 MAC A Way, Tacoma, WA 98465
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Job Number: 21-112
info@crossengineers.com

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 6/14/23

SLH	6/14/23		
CHECKED BY	DATE		
SJK	6/14/23		
PROJ. ENGR	DATE		
Jun 15, 2023			
SITCUM PLAZA			
TACOMA, WA 98401-1837			

APPROVED:
DIRECTOR ENG. DATE 9-3-25

THORNE ROAD
THORNE ROAD PROPERTIES
ELECTRICAL SYMBOLS LEGEND/GENERAL NOTES

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	PRINTED BY: ScottK Jun 15, 2023
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		PORT ADDRESS:ONE SITCUM PLAZA
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		TACOMA, WA 98401-1837

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

6688
E01
78 OF 105

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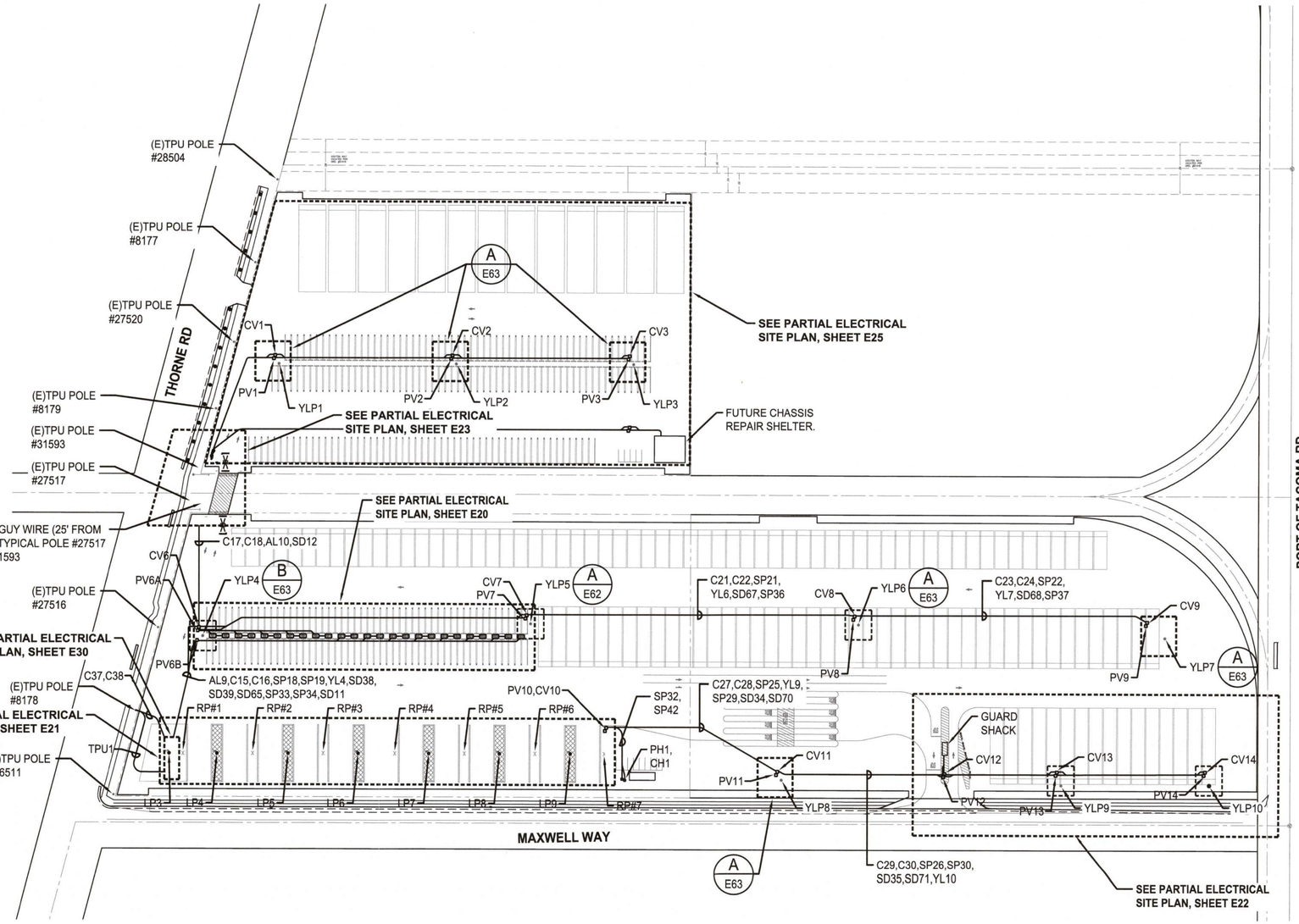

ELECTRICAL SITE PLAN

SCALE: 1"=100'-0"

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

100' 0' 100' 200'

SCALE: 1"=100'

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STEVEN L HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:

DRAWN BY:	SLH	6/14/23
CHECKED BY	SJK	6/14/23
DIRECTOR ENG.	PROJ. ENGR	DATE
PRINTED BY:	ScottK	Jun 15, 2023
PORT ADDRESS:	ONE SITCUM PLAZA	
	TACOMA, WA 98401-1837	

THORNE ROAD
THORNE ROAD PROPERTIES
OVERALL ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide	22 1933	
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		

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79 OF 105

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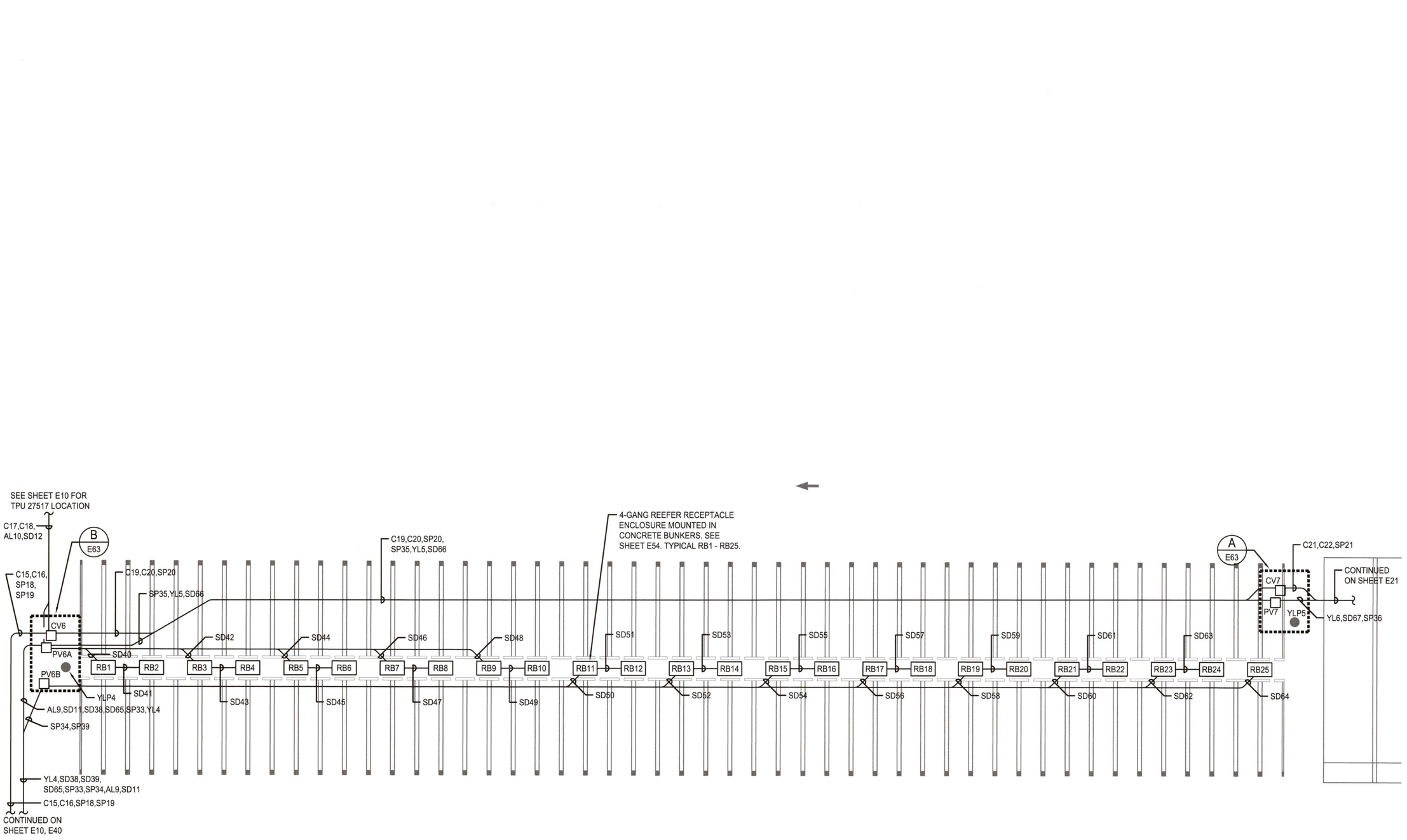

PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=20'-0"

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

20' 0' 20' 40'

SCALE: 1"=20'

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Jun 15, 2023
CUM PLAZA
WA 98401-1837

STEVEN L. HUBBS 33136 REGISTERED PROFESSIONAL ENGINEER
6/14/23

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THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		

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80 OF 105

CONT/CONS:	071908
M. ID:	101241.01
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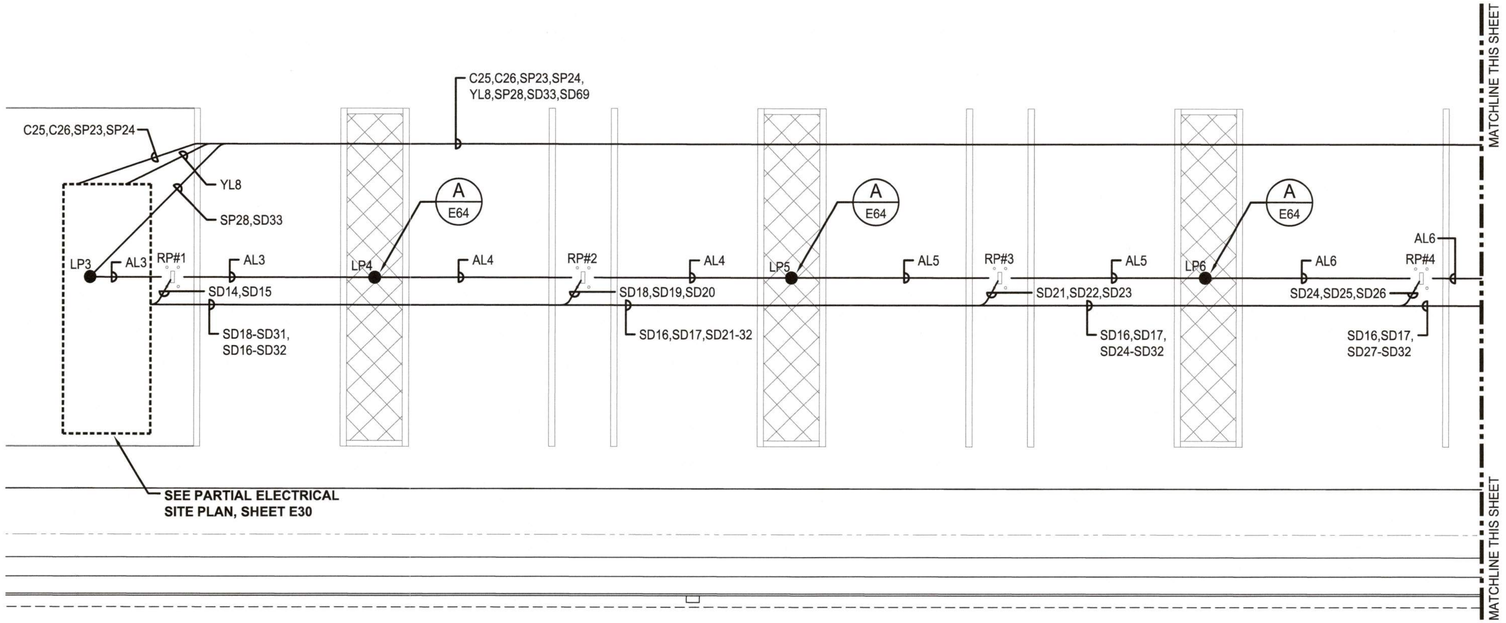
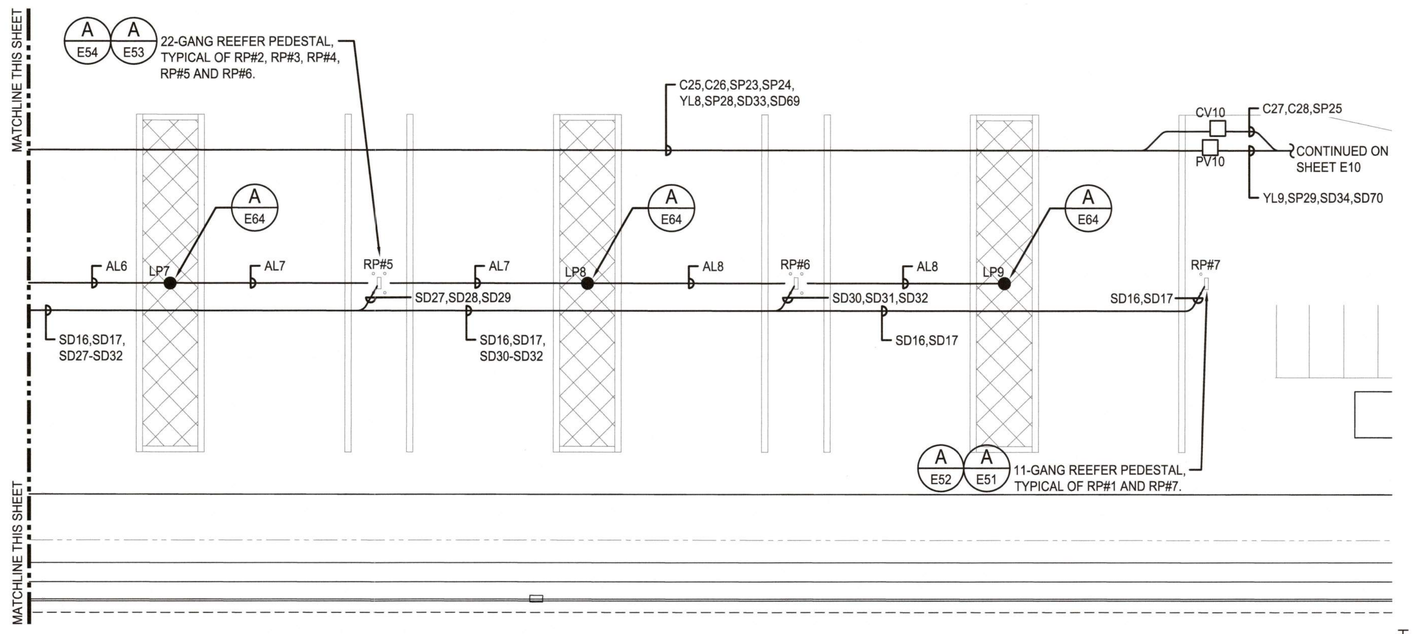


PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=20'-0"



PARTIAL ELECTRICAL SITE PLAN

SCALE: 1"=20'-0"

PROJECT NORTH

TRUE NORTH

NOTE: IF DRAWING IS LESS THEN
22"x34", IT IS A REDUCED SET

20' 0' 20' 40'

SCALE: 1''=20'

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STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 23331 — 6/14/23

APPROVED:

DIRECTOR ENG. DATE 6-13-23

THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

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SJK 6/14/23			
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TACOMA, WA 98401-1837			
DRAWING SCALE: AS NOTED			

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

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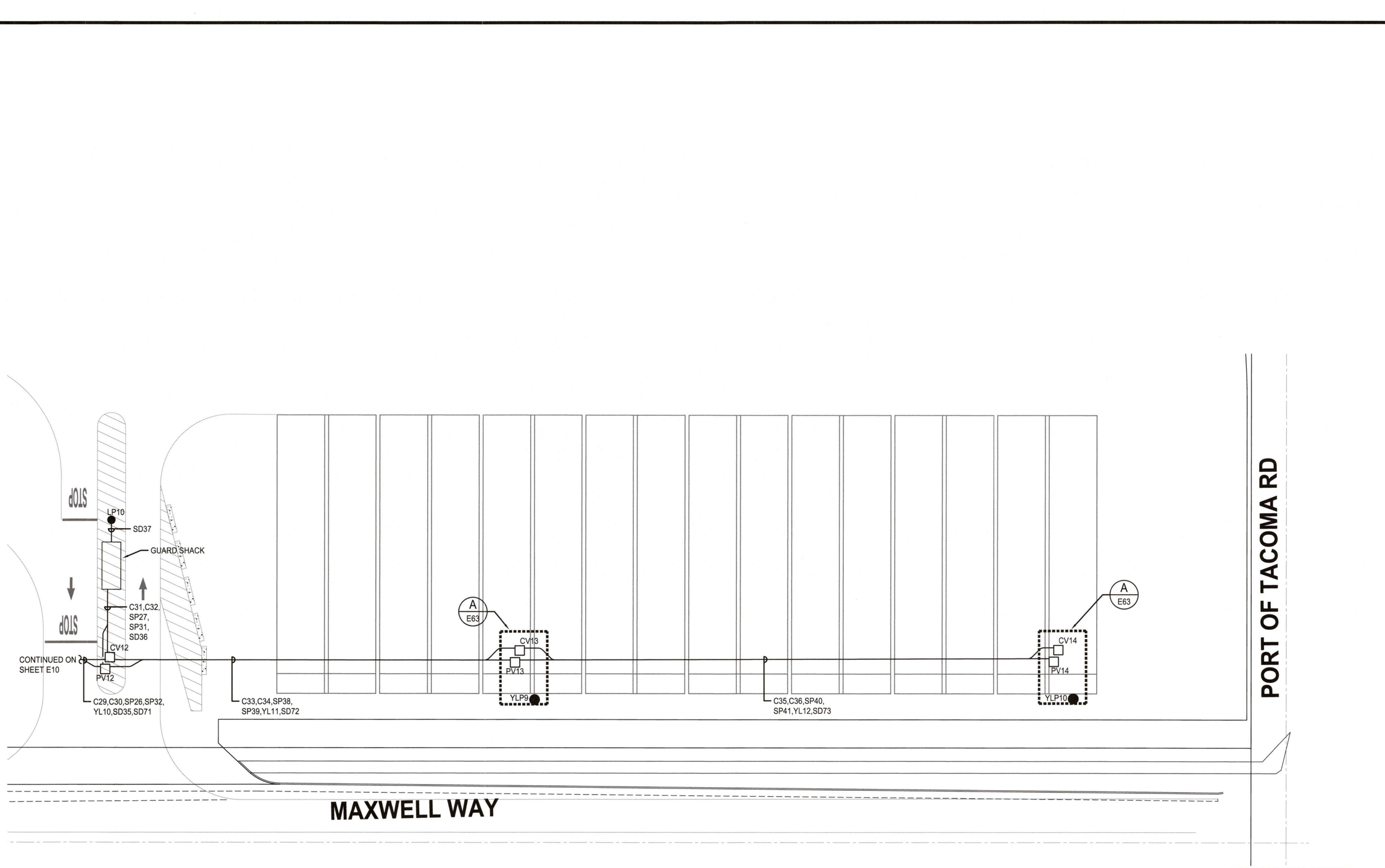

PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

20' 0' 20' 40'
SCALE: 1"=20'

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6688
E22
82 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ: WAB3-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

APPROVED:
DIRECTOR ENG. DATE

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STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER
6/14/23

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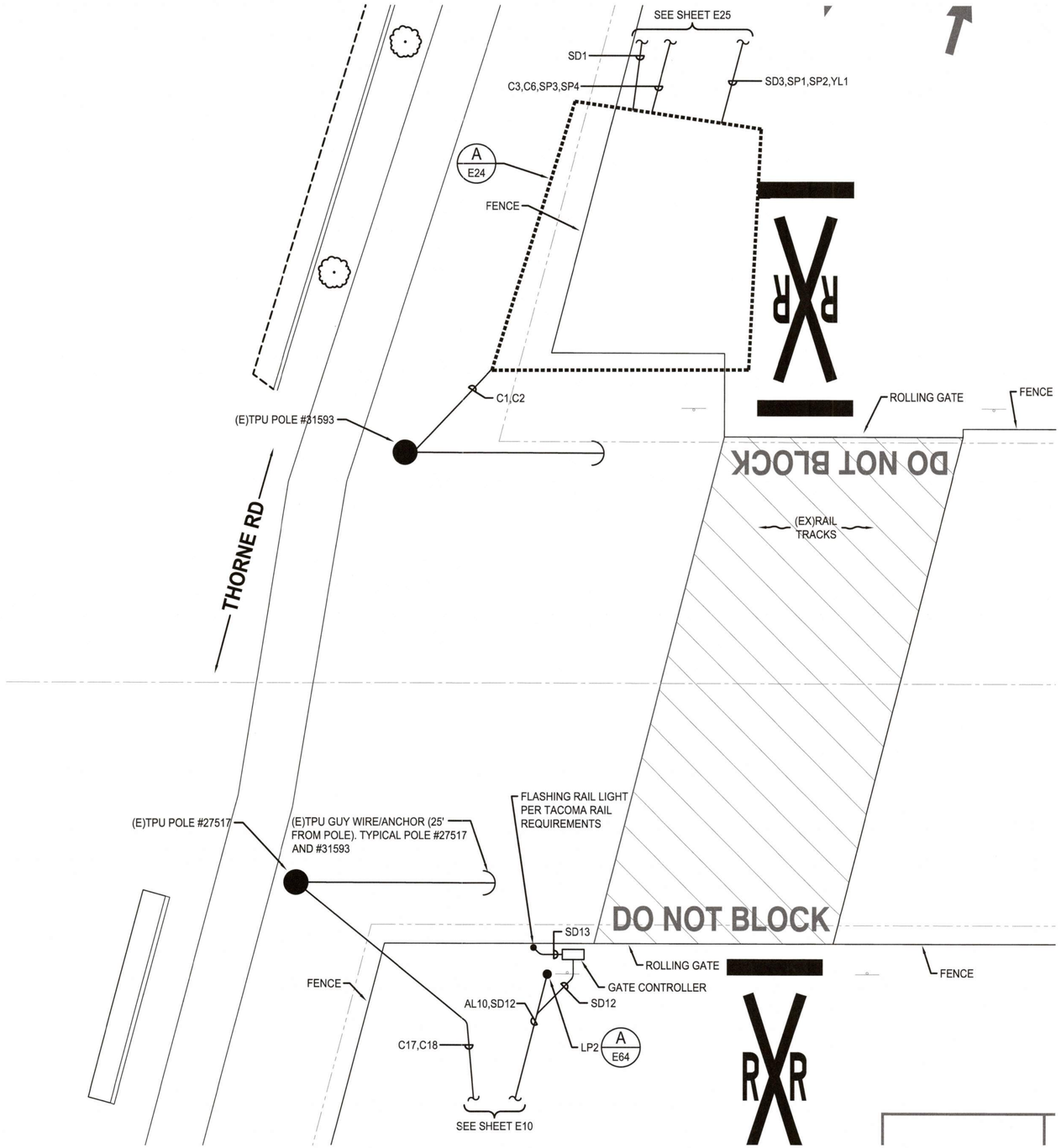

PARTIAL ELECTRICAL SITE PLAN
SCALE: 1/8"=1'-0"

8' 0' 8' 16'
SCALE: 1/8''=1'

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

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Job Number: 21-112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS — STATE OF WASHINGTON — PROFESSIONAL ENGINEER
6/14/23

SLH	6/14/23	
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SJK	6/14/23	
PROJ. ENGR	DATE	

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DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	PRINTED BY: ScottK Jun 15, 2023
DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		PORT ADDRESS:ONE SITCUM PLAZA
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		TACOMA, WA 98401-1837

CONT/CONS:	071908
M. ID:	101241.01
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E23
83 OF 105

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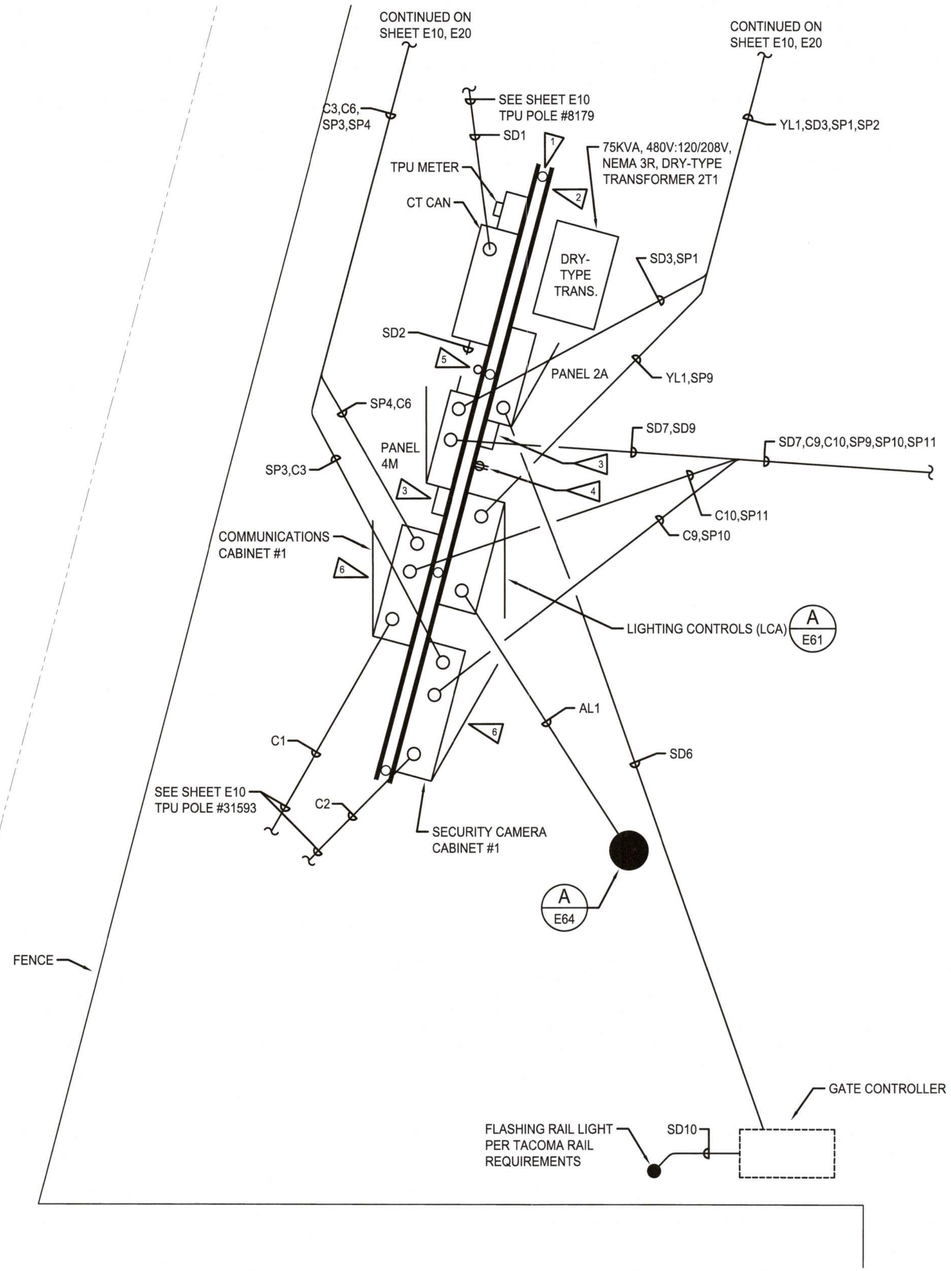

A E24 ELECTRICAL SERVICE SYTR–1 EQUIPMENT LAYOUT

SCALE: 1/2"= 1'-0"

2' 0' 2' 4'

SCALE: 1/2''=1'

NOTE: SEE POWER RISER AND PANEL SCHEDULES, SHEET E41. ALL EXPOSED CONDUIT SHALL BE PVCRS AND ALL EXPOSED METAL PAINTED TWO(2) COATES SAFETY YELLOW.

GENERAL NOTES:

1. SEE CIVIL FOR FENCE AND BOLLARD PLACEMENT.

ELECTRICAL NOTES:

1. PROVIDE 8'-0" SECTION OF 3" RIGID GALVANIZED STEEL CONDUIT WITH THREADED END CAP. PROVIDE 8" ROUND x 3'-0" DEEP, 3000 PSI CONCRETE BASE AND EMBED CONDUIT 3'-0" BELOW FINISHED GRADE. TYPICAL OF THREE (3). PAINT TWO (2) COATS SAFETY YELLOW.
2. PROVIDE (6)1-5/8" HOT DIP GALVANIZED STRUT BETWEEN RIGID STEEL CONDUIT POSTS FOR MOUNTING EQUIPMENT. DRILL CONDUIT AND PROVIDE STAINLESS STEEL MOUNTING HARDWARE FOR STRUT AND EQUIPMENT MOUNTING. PAINT TWO (2) COATS SAFETY YELLOW.
3. PROVIDE NEMA 3R, TRANSIENT VOLTAGE SURGE PROTECTIVE DEVICE (TVSS). SIEMENS TPS3E1110D2 (480V) AND TPS3C1110D2 (208V) OR EQUAL. PROVIDE 3/4" CONDUIT NIPPLE AND 5#10 CU, WITH 30/3P CIRCUIT BREAKER IN EACH PANEL.
4. PROVIDE 120V, 20A, GFCI DUPLEX RECEPTACLE WITH A NEMA 3R "IN-USE" COVER. PROVIDE 3/4"CONDUIT NIPPLE AND 2-#12 CU CONDUCTORS, PLUS GROUND AND CONNECT TO PANEL 2A.
5. PROVIDE (2)10'-0" x 3/4" COPPER CLAD STEEL GROUND RODS SPACED NO LESS THAN 10 FEET APART. PROVIDE (1) GROUND WELL (ERITECH #T416F WITH COVER OR EQUAL). PROVIDE #6 BARE CU BETWEEN EACH GROUND ROD AND UP TO EQUIPMENT MOUNTING STRUCTURE AND ELECTRICAL PANEL.
6. PROVIDE NEMA 4X, 36"x36"x12" ENCLOSURE WITH HINGED LOCKABLE SCREW COVER. SAGINAW CONTROL & ENGINEERING #SCE-36EL3612SS6LP WITH BACKBOARD AND DIN RAIL OR EQUAL.

PROJECT NORTH / TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

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Job Number: 21112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:

THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

SLH 6/14/23			
CHECKED BY DATE			
SJK 6/14/23			
PROJ. ENGR DATE			
PRINTED BY: ScottK Jun 15, 2023			
PORT ADDRESS:ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			
DIRECTOR ENG. DATE			

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
E24
84 OF 105

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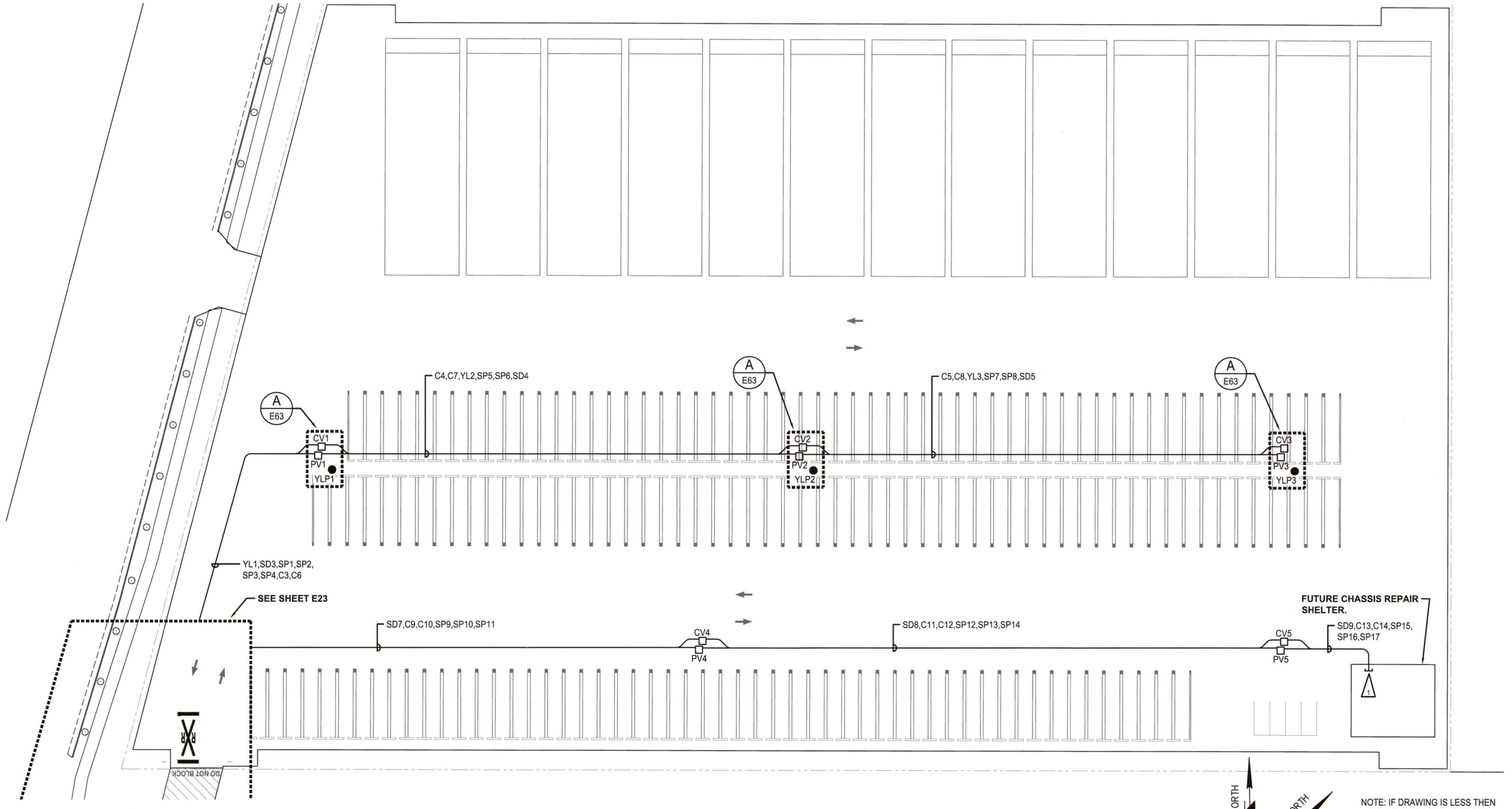
BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E24

BINDING EDGE

ELECTRICAL NOTES:

1. CONTRACTOR SHALL STUB AND CAP CONDUITS BELOW GRADE FOR FUTURE EXTENSION TO CHASSIS REPAIR ELECTRICAL/COMMUNICATIONS EQUIPMENT.



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

30' 0' 30' 60'
SCALE: 1"=30'-0"

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

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Tacoma, WA 98465
Phone: (253) 759-0118
Job Number 21-112
info@crossengineers.com

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:

SLH	6/14/23
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SJK	6/14/23
PROJ. ENGR	DATE
PRINTED BY:	ScottK Jun 15, 2023
PORT ADDRESS:	ONE SITCUM PLAZA
	TACOMA, WA 98401-1837
DRAWING SCALE:	AS NOTED
TOWNSHIP:	21N
RANGE:	3E
SECTION:	34
VERT:	MLLW 19.39' @ Tide 22 1933
DAT-HRZ:	WA83-SF
PARCEL:	72, 85, & 87
CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
PARTIAL ELECTRICAL SITE PLAN

6688
E25
85 OF 105

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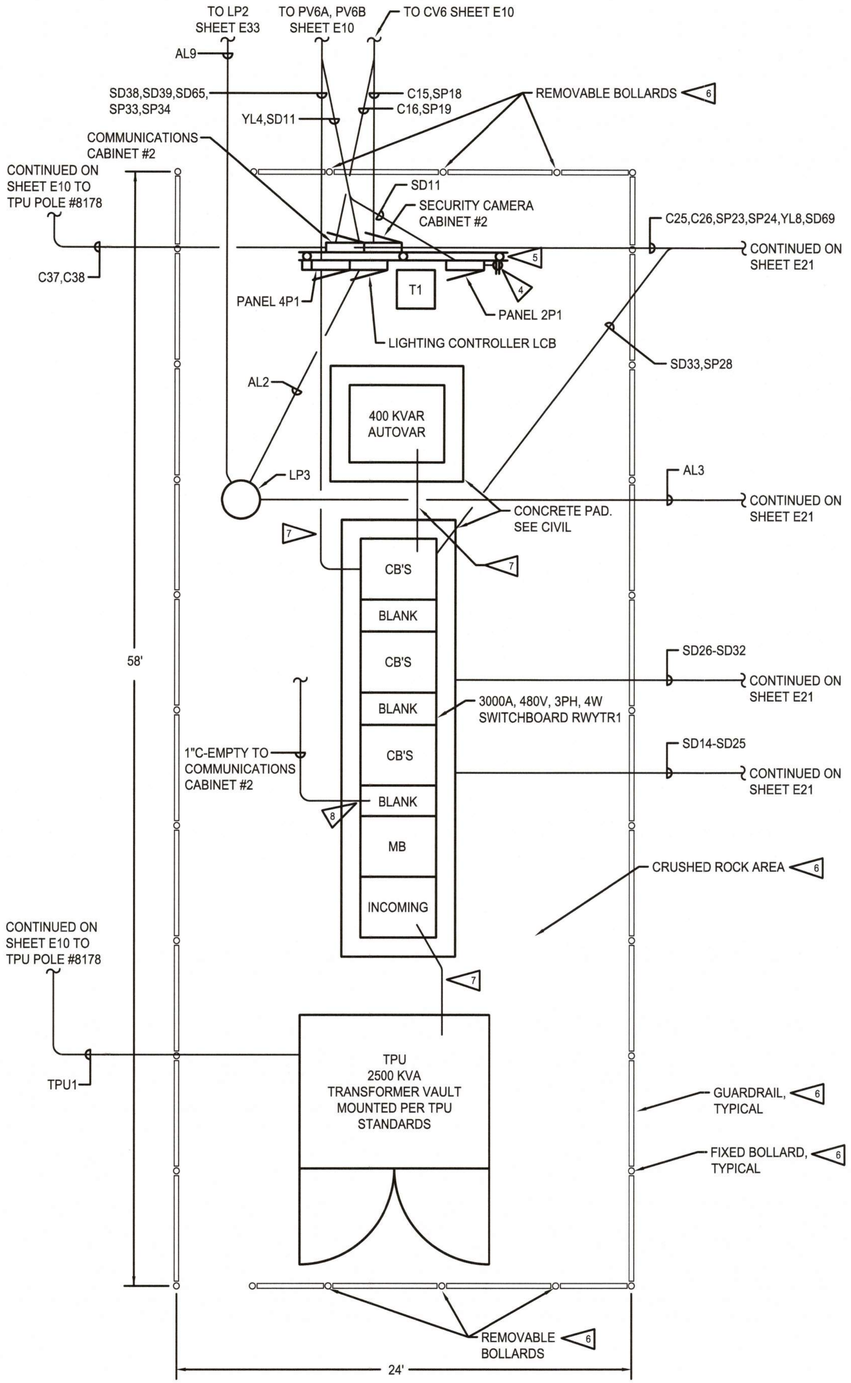
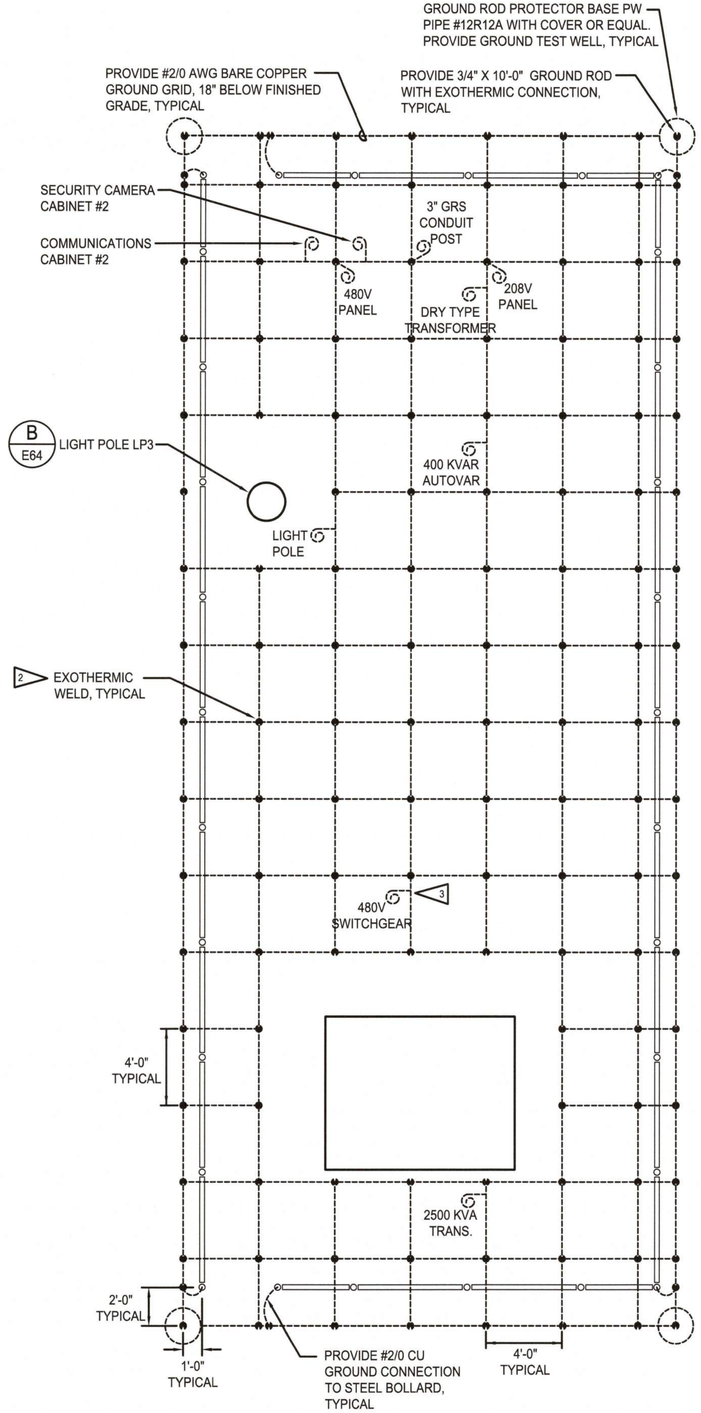


ELECTRICAL SUBSTATION RWYTR-1 EQUIPMENT LAYOUT

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



ELECTRICAL SUBSTATION RWYTR-1 GROUND GRID LAYOUT

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

ELECTRICAL NOTES:

1. PROVIDE EACH CORNER AND EACH FIXED POST ADJACENT TO REMOVABLE POST WITH #2/0 AWG COPPER.
2. EXOTHERMIC WELD ALL BELOW GRADE GROUND GRID CONNECTIONS.
3. ALL PIGTAILS TO EQUIPMENT SHOWN SHALL BE #2/0 AWG BARE COPPER GROUND. PIGTAILS SHALL BE EXTENDED 3'-0" ABOVE FINISHED GRADE FOR CONNECTION TO EQUIPMENT.
4. PROVIDE 8'-0" SECTION OF 3" RIGID GALVANIZED STEEL CONDUIT WITH THREADED END CAP. PROVIDE 8" ROUND x 3'-0" DEEP, 3000 PSI CONCRETE BASE AND EMBED CONDUIT 3'-0" BELOW FINISHED GRADE. TYPICAL OF THREE (3). PAINT TWO (2) COATS SAFETY YELLOW.
5. PROVIDE (6)1-5/8" HOT DIP GALVANIZED STRUT BETWEEN RIGID STEEL CONDUIT POSTS FOR MOUNTING EQUIPMENT. DRILL CONDUIT AND PROVIDE STAINLESS STEEL MOUNTING HARDWARE FOR STRUT AND EQUIPMENT MOUNTING. PAINT TWO (2) COATS SAFETY YELLOW.
6. PROVIDE CRUSHED ROCK BASE INSIDE BOLLARDS AND RAIL. SEE CIVIL FOR CRUSHED ROCK, FIXED BOLLARDS, REMOVABLE BOLLARDS AND RAIL REQUIREMENTS.
7. SEE POWER RISER, SHEET E40.
8. REEFER CONTAINER MONITOR AND BOX PROVIDER BY TENANT. STUB CONDUIT INSIDE SWITCHBOARD.

PROJECT NORTH / TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

4' 0' 4' 8'

SCALE: 1/4''=1'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
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STEVEN L HUBBS — 21331 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:

SLH	6/14/23		
CHECKED BY	DATE		
SJK	6/14/23		
PROJ. ENGR	DATE		
PRINTED BY:	Scott	K	Jun 15, 2023
PORT ADDRESS:	DNE	SITCUM PLAZA	
		TACOMA, WA 98401-1837	

THORNE ROAD
THORNE ROAD PROPERTIES
ELECTRICAL SUBSTATION LAYOUT

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

6688
E30
86 OF 105

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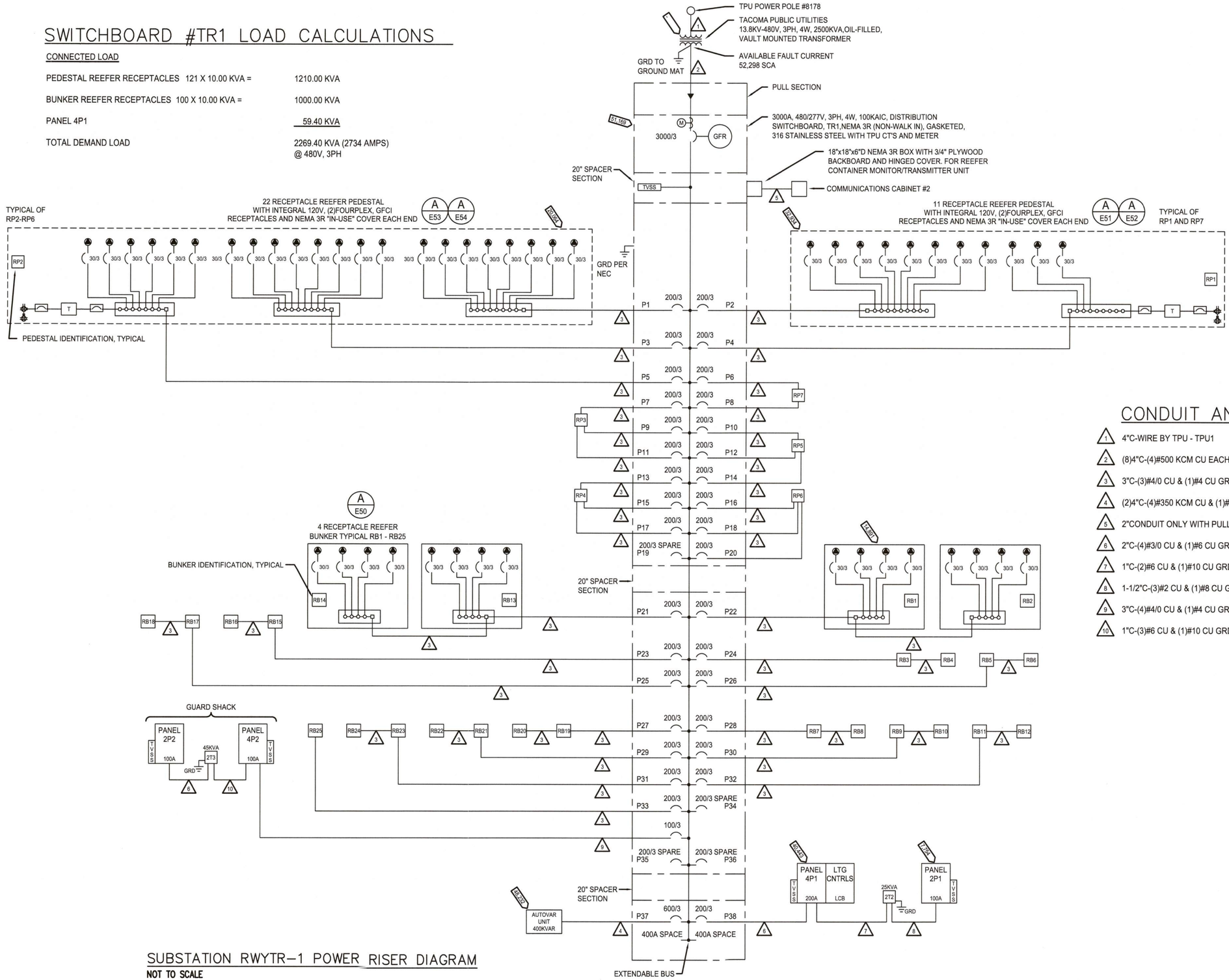
BINDING EDGE

SWITCHBOARD #TR1 LOAD CALCULATIONS

CONNECTED LOAD

PEDESTAL REEFER RECEPTACLES 121 X 10.00 KVA =	1210.00 KVA
BUNKER REEFER RECEPTACLES 100 X 10.00 KVA =	1000.00 KVA
PANEL 4P1	59.40 KVA
TOTAL DEMAND LOAD	2269.40 KVA (2734 AMPS) @ 480V, 3PH



SUBSTATION RWYTR-1 POWER RISER DIAGRAM

NOT TO SCALE

CONDUIT AND WIRE SCHEDULE

1. 4"C-WIRE BY TPU - TPU1
2. (8)4"C-(4)#500 KCM CU EACH
3. 3"C-(3)#4/0 CU & (1)#4 CU GRD
4. (2)4"C-(4)#350 KCM CU & (1)#1/0 CU GRD EACH
5. 2"CONDUIT ONLY WITH PULLSTRING
6. 2"C-(4)#3/0 CU & (1)#6 CU GRD
7. 1"C-(2)#6 CU & (1)#10 CU GRD
8. 1-1/2"C-(3)#2 CU & (1)#8 CU GRD
9. 3"C-(4)#4/0 CU & (1)#4 CU GRD
10. 1"C-(3)#6 CU & (1)#10 CU GRD

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
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APPROVED:

DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
SUBSTATION POWER RISER DIAGRAM

SLH 6/14/23			
CHECKED BY DATE			
SJK 6/14/23			
PROJ. ENGR DATE			
PRINTED BY: ScottK Jun 15, 2023			
PORT ADDRESS:ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			
DRAWING SCALE: AS NOTED			
SECTION: 34	RANGE: 3E	TOWNSHIP: 21N	CONT/CONS: 071908
VERT: MLLW 19.39' @ Tide 22 1933	DAT-HRZ: WA83-SF		M. ID: 101241.01
PARCEL: 72, 85, & 87			PHASE: 100% DESIGN

6688
E40
87 OF 105

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BINDING EDGE

NEMA 3R, GASKETED, 316 STAINLESS

SURFACE MOUNTING
22,000 AIC

PANEL SCHEDULE

NO. **4M** LOCATION: SYTR-1
SERVING: EQUIPMENT

480/277 VOLTS 3PHASE 4WIRE
400 AMPS WITH 400 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	LIGHTS	15.00	60				SPACE	2
3	YLP1,YLP2,YLP3							4
5			3					6
7	UNIT SUBS	9.00	60					8
9			2					10
11	SPARE		200					12
13								14
15			3					16
17	LCA - LIGHTING CONTROLS	3.50	15					18
19			2					20
21	PANEL 2A VIA XFMR 2T1	4.20	60					22
23			2					24
25	TVSS		30					26
27								28
29			3				SPACE	30

REMARKS: .

CONNECTED LOAD: 31.7 KVA 38 AMPS
DEMAND LOAD: 35.4 KVA 43 AMPS

PANEL 4M LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	15.00	X	1.25	210.19(A)(1)	=	18.75
RECEPTS TO 10KW	.18	X	1.00	220.44	=	.18
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	2.50	X	1.25	430.24	=	2.50
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	1.50	X	1.00	220.51	=	1.50
MISCELLANEOUS	12.50	X	1.00		=	12.50
TOTAL CONNECTED	31.7 KVA (38 AMPS)				TOTAL DEMAND	35.4 KVA (43 AMPS)

NEMA 3R, GASKETED, 316 STAINLESS

SURFACE MOUNTING
10,000 AIC

PANEL SCHEDULE

NO. **2A** LOCATION: SYTR-1
SERVING: EQUIPMENT

120/240 VOLTS 1PHASE 3WIRE
100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	RECEPTACLE	.18	20		20	2.50	GATE CONTROLLER	2
3	SECURITY CABINET HEATER	.50			2			4
5	COMM. CABINET HEATER	.50					SPACE	6
7	LCA CABINET HEATER	.50						8
9	SPARE							10
11								12
13								14
15	SPARE		20					16
17	SPACE							18
19								20
21								22
23								24
25	SPACE							26
27	TVSS	-	30					28
29			2				SPACE	30

REMARKS: .

CONNECTED LOAD: 4.2 KVA 18 AMPS
DEMAND LOAD: 4.8 KVA 20 AMPS

PANEL 2A LOAD CALCULATIONS

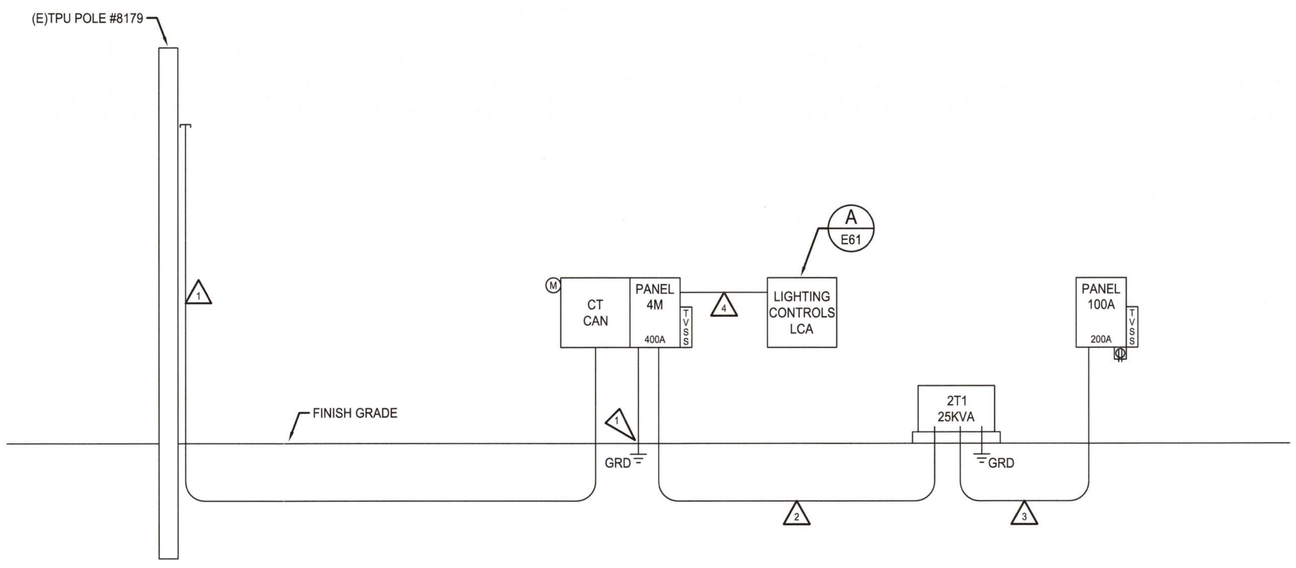
SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	210.19(A)(1)	=	-
RECEPTS TO 10KW	.18	X	1.00	220.44	=	.18
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	2.50	X	1.25	430.24	=	3.13
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	1.50	X	1.00	220.51	=	1.50
MISCELLANEOUS	-	X	1.00		=	-
TOTAL CONNECTED	4.2 KVA (18 AMPS)				TOTAL DEMAND	4.8 KVA (20 AMPS)

ELECTRICAL NOTES:

1. PROVIDE GROUND TEST WELL. OLDCASTLE "CHRISTY" 10" DIAMETER x 12" DEEP OR EQUAL.

CONDUIT AND WIRE SCHEDULE

1. 4"C-(4)#600 KCM CU
2. 1"C-(2)#6 CU & (1)#10 CU GRD
3. 1-1/2"C-(3)#2 CU & (1)#8 CU GRD
4. 1"C-(3)#6 CU & (1)#10 CU GRD



POWER RISER DIAGRAM

NOT TO SCALE

NOTE: SEE SHEET E23 FOR LOCATION AND EQUIPMENT MOUNTING. ADDITIONAL CONDUIT AND WIRE IDENTIFIED ON SITE PLANS AND CONDUIT WIRE SCHEDULES.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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6/14/23

APPROVED:
DIRECTOR ENG. DATE

SLH	6/14/23
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SJK	6/14/23
PROJ. ENGR	DATE
PRINTED BY:	ScottK Jun 15, 2023
PORT ADDRESS:	ONE SITCUM PLAZA
	TACOMA, WA 98401-1837
DRAWING SCALE:	AS NOTED

THORNE ROAD
THORNE ROAD PROPERTIES
SUBSTATION POWER RISER DIAGRAM

6688
E41
88 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	SECTION: 34

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BINDING EDGE

NEMA 3R, GASKETED, 316 STAINLESS STEEL

SURFACE MOUNTING
42,000 AIC

PANEL SCHEDULE

NO. **4P1**

LOCATION: SUBSTATION RWYTR-1
SERVING: LIGHTS

480/277 VOLTS 3PHASE 4WIRE
200 AMPS WITH 200 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	LIGHTS YLP4,YLP5,YLP6,	30.75	60		30	3.00	UNIT SUB YLP4	2
3	YLP7,YLP8,YLP9,YLP10				2			4
5			3		30	3.00	UNIT SUB YLP5	6
7	SPARE		60		2			8
9					30	3.00	UNIT SUB YLP6	10
11			3		2			12
13	LCB - LIGHTING CONTROLS	3.50	15		30	3.00	UNIT SUB YLP7	14
15			2		2			16
17	SPACE				30	3.00	UNIT SUB YLP8	18
19	SPACE				2			20
21	PANEL 2P1	4.20	60		30	3.00	UNIT SUB YLP9	22
23	VIA 50KVA XFMR 2T2		2		2			24
25	SPACE				30	3.00	UNIT SUB YLP10	26
27					2			28
29							SPACE	30
31								32
33								34
35	SPACE							36
37	TVSS	-	30					38
39								40
41			3				SPACE	42

REMARKS: .

CONNECTED LOAD: 59.4 KVA 72 AMPS
DEMAND LOAD: 67.8 KVA 82 AMPS

PANEL 4P1 LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	30.75	X	1.25	220.19(A)(1)	=	38.44
RECEPTS TO 10KW	.18	X	1.00	220.44	=	.18
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	2.50	X	1.25	430.24	=	3.13
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	1.50	X	1.00	220.51	=	1.50
MISCELLANEOUS	24.50	X	1.00		=	24.50
TOTAL CONNECTED	59.4 KVA (72 AMPS)			TOTAL DEMAND		67.8 KVA (82 AMPS)

NEMA 3R, GASKETED, 316 STAINLESS STEEL

SURFACE MOUNTING
10,000 AIC

PANEL SCHEDULE

NO. **2P1**

LOCATION: SUBSTATION RWYTR-1
SERVING: MISCELLANEOUS

120/240 VOLTS 1PHASE 3WIRE
100 AMPS WITH 100 MAIN BREAKER

CKT NO.	LOAD DESCRIPTION	KVA	TRIP AMPS		TRIP AMPS	KVA	LOAD DESCRIPTION	CKT NO.
1	RECEPTACLE	.18	20		20	2.50	GATE CONTROLLER	2
3	SECURITY CABINET HEATER	.50			2			4
5	COMM. CABINET HEATER	.50			20		SPARE	6
7	LCB CABINET HEATER	.50						8
9	SPARE				20		SPARE	10
11								12
13							SPACE	14
15								16
17	SPARE		20					18
19	SPACE							20
21								22
23								24
25	SPACE							26
27	TVSS		30					28
29			2				SPACE	30

REMARKS: .

CONNECTED LOAD: 4.2 KVA 18 AMPS
DEMAND LOAD: 4.8 KVA 20 AMPS

PANEL 2P1 LOAD CALCULATIONS

SERVICE	KVA LOAD		FACTOR	NEC REF.		DEMAND LOAD
LIGHTING	-	X	1.25	210.19(A)(1)	=	-
RECEPTS TO 10KW	.18	X	1.00	220.44	=	.18
RECEPTS OVER 10KW	-	X	0.50	220.44	=	-
MOTORS (LARGEST)	2.50	X	1.25	430.24	=	3.13
MOTORS	-	X	1.00	430.24	=	-
KITCHEN EQUIP.	-	X	1.00	220.56	=	-
WELDERS	-	X	1.00	630.11(B)	=	-
AIR CONDITIONING	-	X	1.00	220.50	=	-
ELECTRIC HEAT	1.50	X	1.00	220.51	=	1.50
MISCELLANEOUS	-	X	1.00		=	-
TOTAL CONNECTED	4.2 KVA (18 AMPS)			TOTAL DEMAND		4.8 KVA (20 AMPS)

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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SLH	6/14/23		
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SJK	6/14/23		
PROJ. ENGR	DATE		

APPROVED:
DIRECTOR ENG. DATE

PRINTED BY: ScottK Jun 15, 2023
PORT ADDRESS:ONE SITCUM PLAZA
TACOMA, WA 98401-1837

6688
E42
89 OF 105

THORNE ROAD
THORNE ROAD PROPERTIES
SUBSTATION PANEL SCHEDULES

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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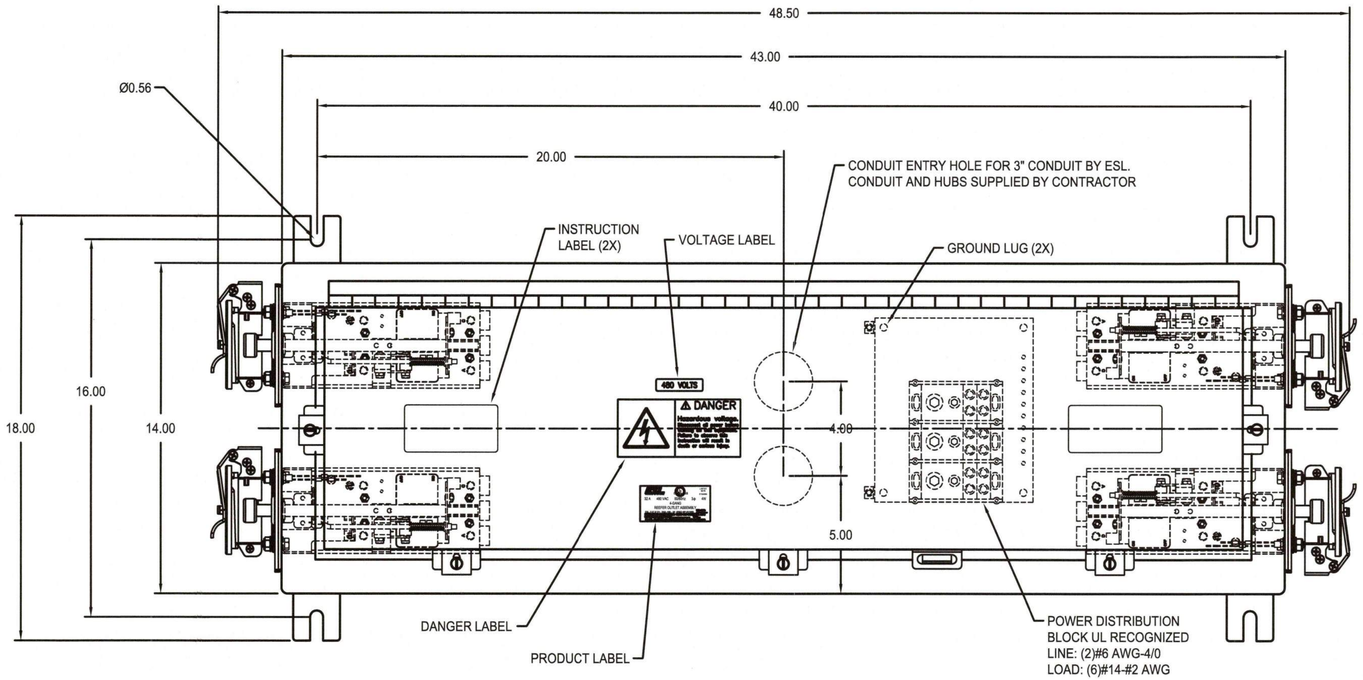
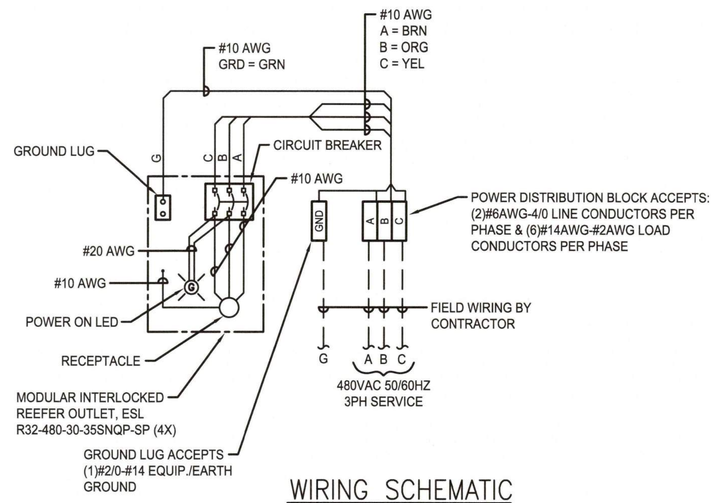


TOP VIEW

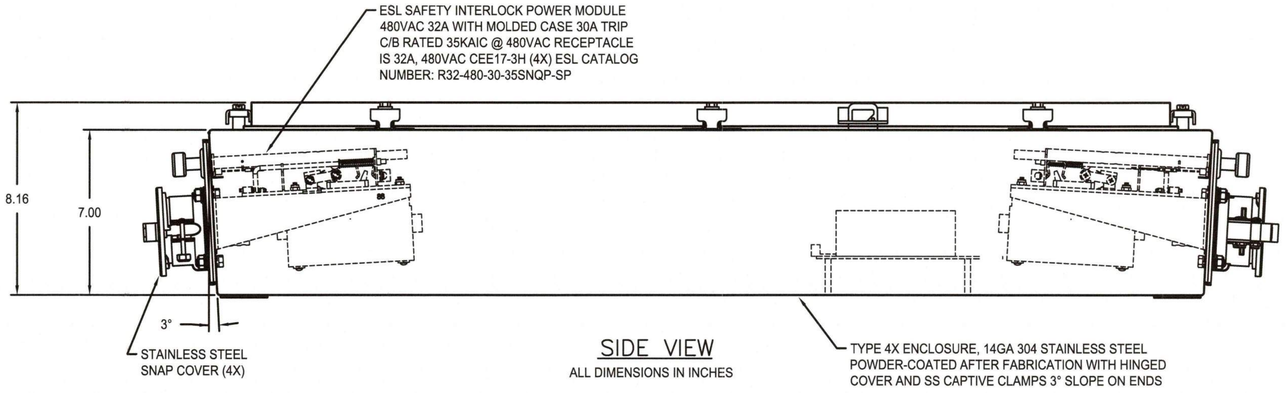
ALL DIMENSIONS IN INCHES

NOTES:

1. ENDS OF ENCLOSURE ARE SLOPED 3 DEGREES.
2. DESICCANT PACKAGE IS TO BE INSTALLED JUST PRIOR TO CLOSING ENCLOSURE FOR THE LAST TIME AT FINAL CONSTRUCTION PUNCH LIST.
3. CONDUIT ENTRY BY ESL AND HUBS SUPPLIED BY CONTRACTORS.
4. USE ONLY 4X RATED UL LISTED HUBS/CONDUIT FITTINGS. AFTER INSTALLATION, ALL CONDUIT OPENINGS MUST BE COMPLETELY SEALED WITH UL LISTED EXPANDING SEALANT. FAILURE TO SEAL MAY ALLOW CONDENSATION AND WILL VOID MANUFACTURER'S WARRANTY. COMMON DUCT SEAL IS NOT SUITABLE FOR THIS APPLICATION.
5. FINISH: POWDER COATED SERIES W49.
6. UNITS MUST BE STORED IN A COOL DRY PLACE PRIOR TO INSTALLATION. FAILURE TO DO SO WILL VOID MANUFACTURER'S WARRANTY.

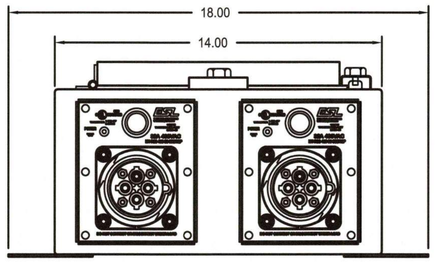


WIRING SCHEMATIC



SIDE VIEW

ALL DIMENSIONS IN INCHES



END VIEW

(SNAP COVERS NOT SHOWN)

A E50 4-GANG BUNKER ASSEMBLY

NO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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6/14/23

DESIGNED:	SLH	6/14/23	
DRAWN:	CHECKED BY	DATE	
CHECKED:	SJK	6/14/23	
APPROVED:	PROJ. ENGR	DATE	
DIRECTOR ENG. DATE	PRINTED BY: ScottK Jun 15, 2023		
	PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837		

THORNE ROAD
THORNE ROAD PROPERTIES
4-GANG REEFER BUNKER DETAIL

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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90 OF 105

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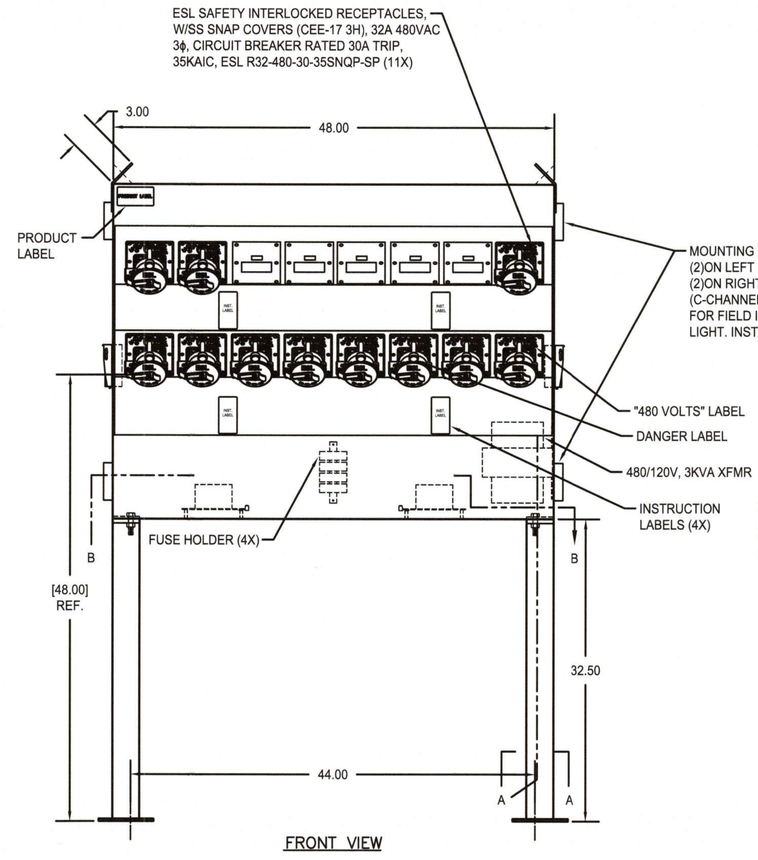
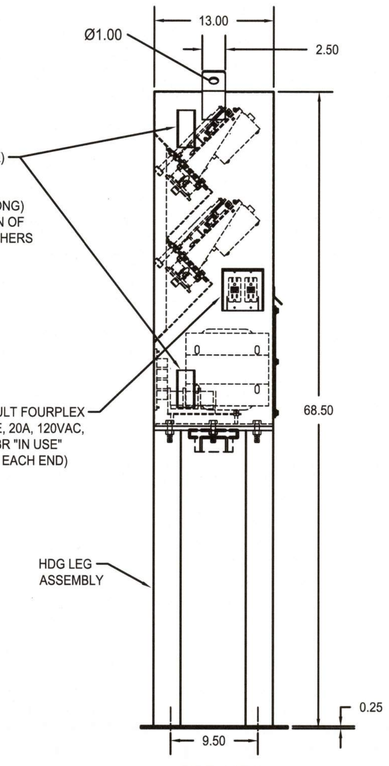
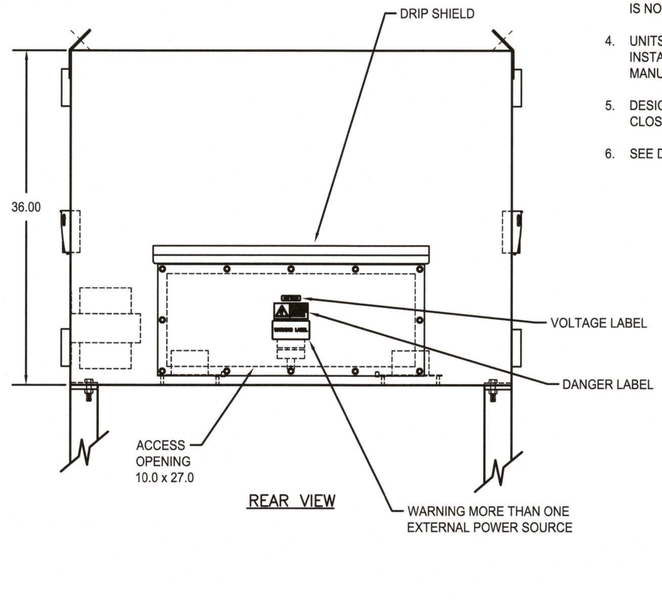


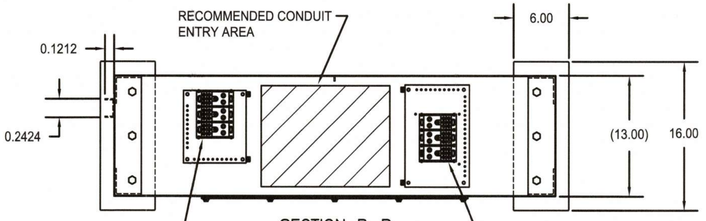
FRONT VIEW



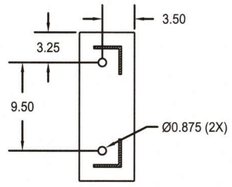
SIDE VIEW



REAR VIEW



SECTION B–B



SECTION A–A
(TYP 2)

NOTES:

1. FINISH POWDER COAT SERIES W49. SEE TITLE BLOCK FOR COLOR.
2. CONDUIT ENTRY TO BE PUNCHED IN THE FIELD (BY OTHERS).
3. USE ONLY 4X RATED UL LISTED HUBS/CONDUIT FITTINGS. AFTER INSTALLATION, ALL CONDUIT OPENINGS MUST BE COMPLETELY SEALED WITH UL LISTED EXPANDING FOAM. FAILURE TO SEAL MAY ALLOW CONDENSATION AND WILL VOID MANUFACTURER'S WARRANTY. COMMON DUCT SEAL IS NOT SUITABLE FOR THIS APPLICATION.
4. UNITS MUST BE STORED IN A COOL DRY PLACE PRIOR TO INSTALLATION, FAILURE TO DO SO WILL VOID MANUFACTURER'S WARRANTY.
5. DESICCANT PACKAGE IS TO BE INSTALLED JUST PRIOR TO CLOSING ENCLOSURE FOR THE LAST TIME.
6. SEE DRAWING 0901-226976N FOR WIRING SCHEMATIC.

A / E51 11–GANG FREE STANDING REEFER OUTLET ASSEMBLY

ALL DIMENSIONS IN INCHES

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

CROSS ENGINEERS, INC
833 A.K.A. Way, Tacoma, WA 98405
Phone: (253) 756-5178
Job Number: 21-112
info@crossengineers.com

STEVEN L. HUBBS — 21009 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

SLH	6/14/23		
CHECKED BY	DATE		
SJK	6/14/23		
PROJ. ENGR	DATE		

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
11-GANG REEFER PEDESTAL DETAIL

PRINTED BY:	ScottK Jun 15, 2023		
PORT ADDRESS:	ONE SITCUM PLAZA		
	TACOMA, WA 98401-1837		
CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID:	101241.01	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

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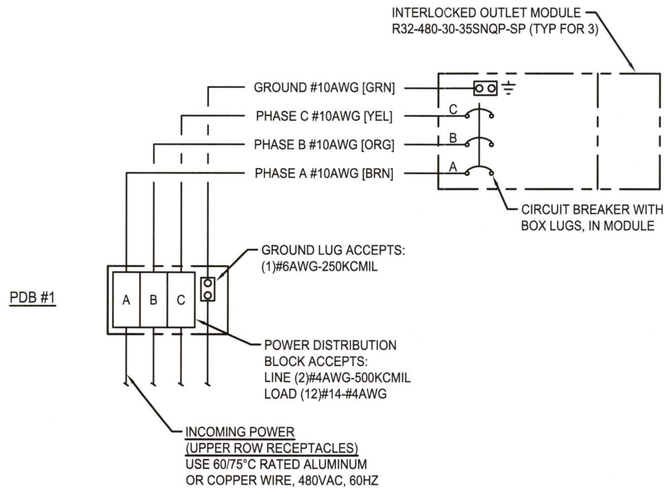
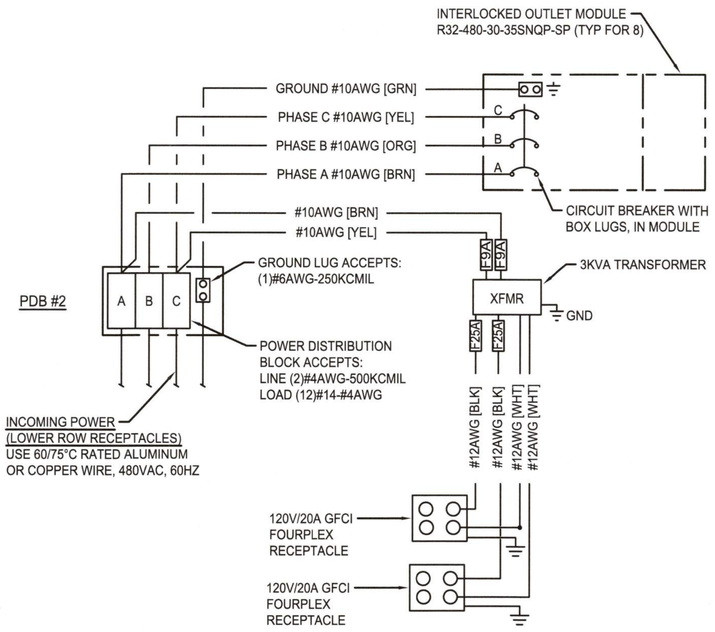
6688
E51
91 OF 105

PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E51





A E52 11–GANG REEFER OUTLET ASSEMBLY
NO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2021\21-112Dwgs\21-112-E52

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
253 MLK Jr. Way
Tacoma, WA 98405
Phone: (253) 759-5318
Job Number: 21-112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:
DIRECTOR ENG. DATE

SLH 6/14/23
CHECKED BY DATE
SJK 6/14/23
PROJ. ENGR DATE
PRINTED BY: ScottK Jun 15, 2023
PORT ADDRESS:DNE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD
THORNE ROAD PROPERTIES
11-GANG REEFER WIRING DIAGRAM

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
E52
92 OF 105

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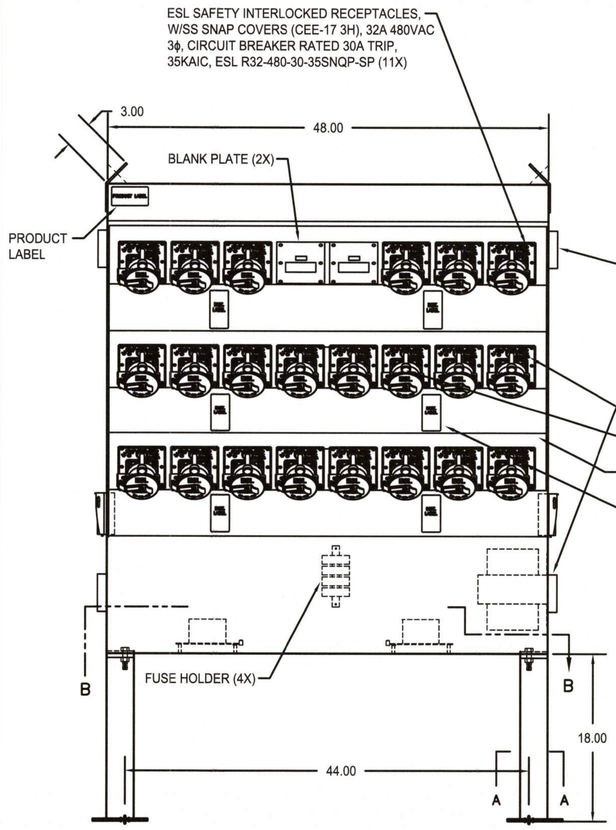
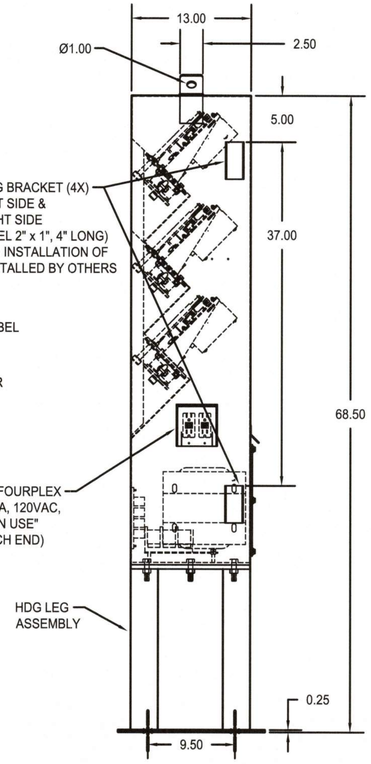
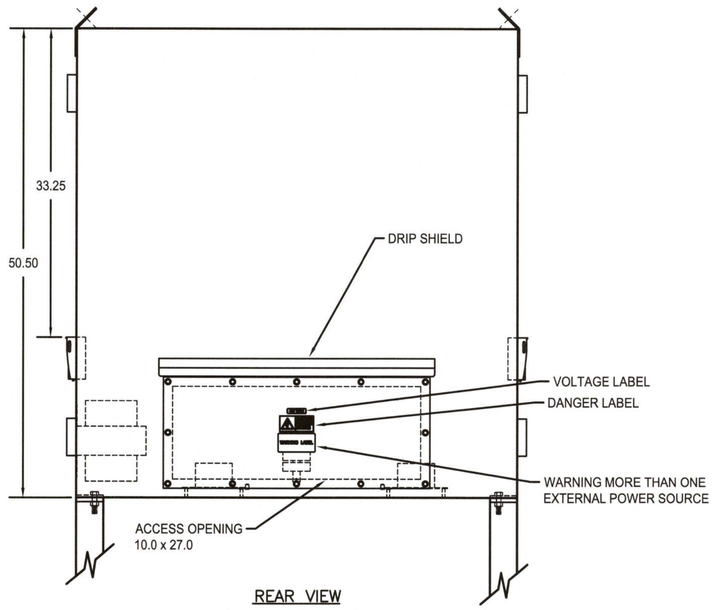


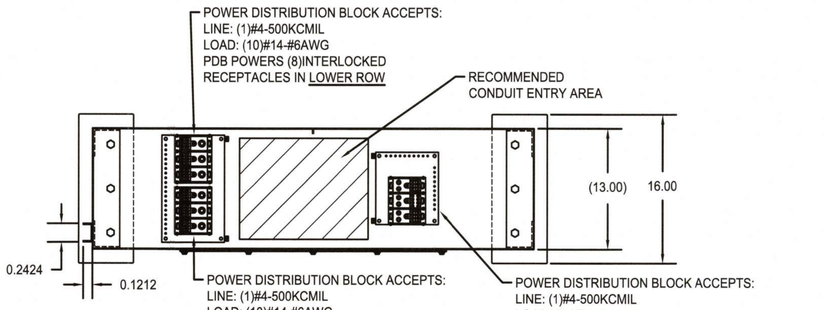
FRONT VIEW



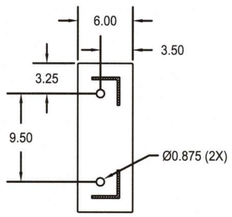
SIDE VIEW



REAR VIEW



SECTION B–B



SECTION A–A
(TYP 2)

NOTES:

1. FINISH POWDER COAT SERIES W49. SEE TITLE BLOCK FOR COLOR.
2. CONDUIT ENTRY TO BE PUNCHED IN THE FIELD (BY OTHERS).
3. USE ONLY 4X RATED UL LISTED HUBS/CONDUIT FITTINGS. AFTER INSTALLATION, ALL CONDUIT OPENINGS MUST BE COMPLETELY SEALED WITH UL LISTED EXPANDING FOAM. FAILURE TO SEAL MAY ALLOW CONDENSATION AND WILL VOID MANUFACTURER'S WARRANTY. COMMON DUCT SEAL IS NOT SUITABLE FOR THIS APPLICATION.
4. UNITS MUST BE STORED IN A COOL DRY PLACE PRIOR TO INSTALLATION, FAILURE TO DO SO WILL VOID MANUFACTURER'S WARRANTY.
5. DESICCANT PACKAGE IS TO BE INSTALLED JUST PRIOR TO CLOSING ENCLOSURE FOR THE LAST TIME.
6. SEE DRAWING 0901-226976N FOR WIRING SCHEMATIC.

A 22–GANG FREE STANDING REEFER OUTLET ASSEMBLY
E63 ALL DIMENSIONS IN INCHES

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
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Tacoma, WA 98405
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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS 23331 REGISTERED PROFESSIONAL ENGINEER 6/14/23

APPROVED:

DIRECTOR ENG.	DATE	PRINTED BY: ScottK Jun 15, 2023	
SLH	6/14/23	PORT ADDRESS:ONE SITCUM PLAZA	
CHECKED BY	DATE	TACOMA, WA 98401-1837	
SJK	6/14/23		
PROJ. ENGR	DATE		

THORNE ROAD
THORNE ROAD PROPERTIES
22-GANG REEFER PEDESTAL DETAIL

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
E53
93 OF 105

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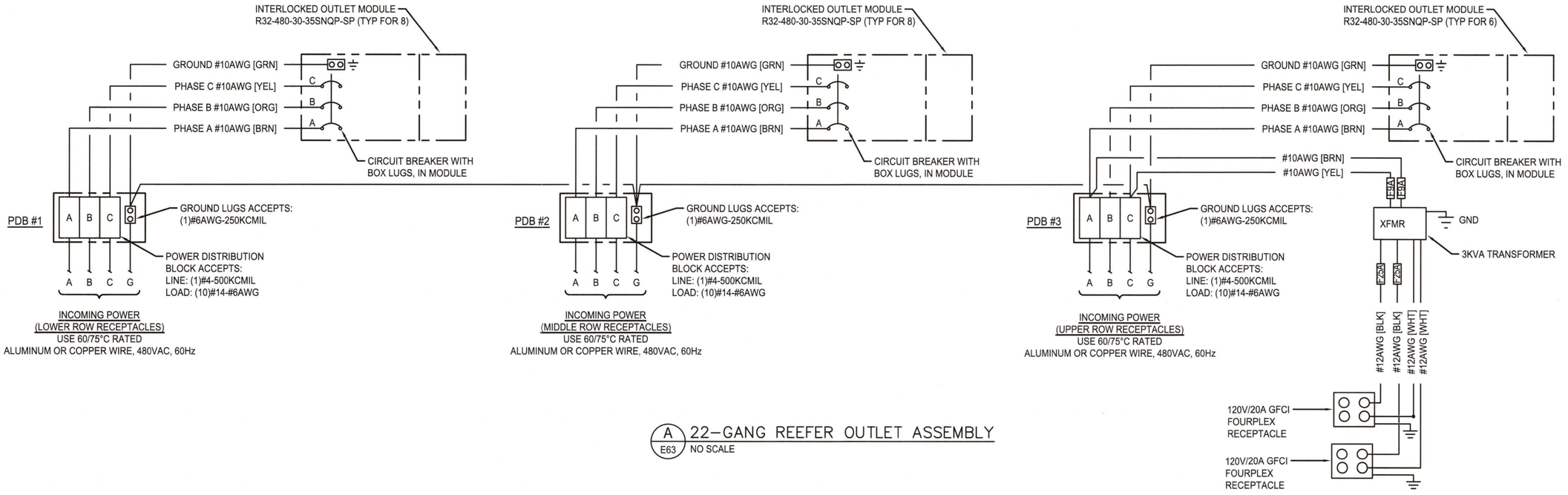

A E63 22-GANG REEFER OUTLET ASSEMBLY
NO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E54

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
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Tacoma, WA 98405
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Phone: (253) 759-5315
Job Number: 21-112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

SLH	6/14/23	
CHECKED BY	DATE	
SJK	6/14/23	
PROJ. ENGR	DATE	
ScottK Jun 15, 2023		
SITCUM PLAZA		
TACOMA, WA 98401-1837		

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
22-GANG REFER WIRING DIAGRAM

PRINTED BY: ScottK Jun	SECTION: 34	TOWNSHIP: 21N	RANGE: 3E
PORT ADDRESS:DINE SITCUM	VERT: MLLW 19.39' @ Tide 22 1933	DAT-HRZ: WA83-SF	
TACOMA, WA 98401-1837	DRAWING SCALE: AS NOTED	PARCEL: 72, 85, & 87	

CONT/CONS: 071908			
M. ID: 101241.01			
PHASE: 100% DESIGN			

6688
E54
94 OF 105

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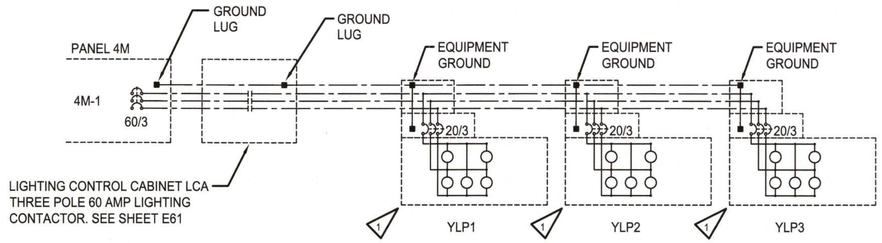
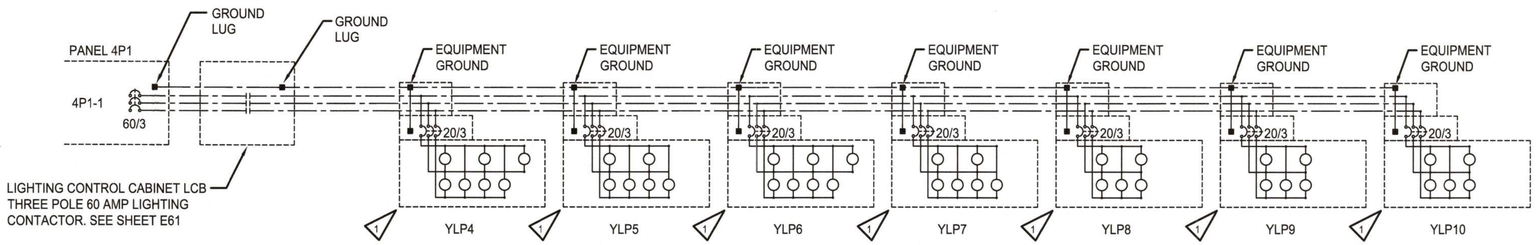


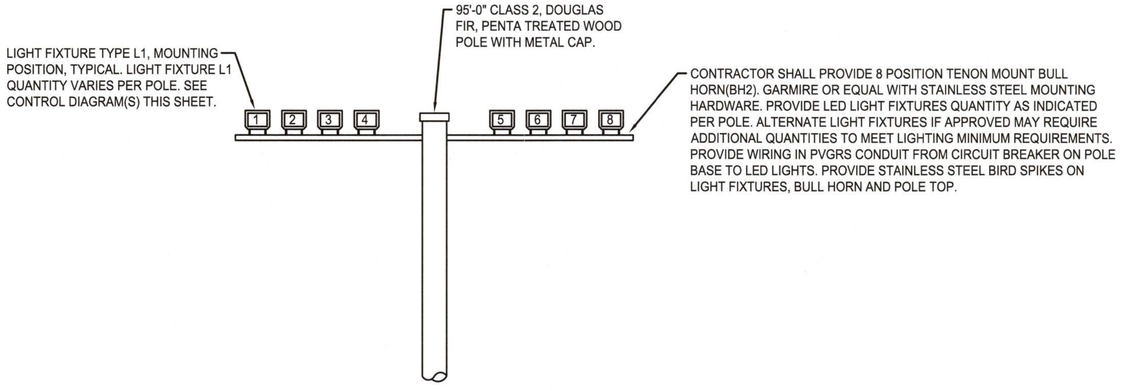
LIGHTING CONTROL CIRCUIT #1

NOT TO SCALE



LIGHTING CONTROL CIRCUIT #2

NOT TO SCALE



LIGHTING POLE ELEVATION TYPICAL

NO SCALE

ELECTRICAL NOTES:

1. PROVIDE #10 CU IN PVGRS CONDUIT FROM CIRCUIT BREAKER ON EACH POLE UP TO A 8"x8"x6", NEMA 4, 316 STAINLESS STEEL BOX WITH COVER LOCATED BELOW CROSS ARM. MOUNTING HARDWARE SHALL BE STAINLESS STEEL FOR LIGHT FIXTURES AND CROSS ARM. LIGHT FIXTURE MANUFACTURER SHALL PROVIDE FIXTURE ID, AIMING ANGLES, BEAM SPREAD AND MOUNTING POSITIONS FOR FIELD AIMING INSTALLATION BY CONTRACTOR. MINIMUM 3FC WITH MAX/MIN OF LESS THAN 6 FOR THE SOUTH (CONTAINER WASH YARD) HALF OF THE SITE AND MINIMUM 1FC WITH MAX/MIN OF LESS THAN 6 FOR THE NORTH (CONTAINER STORAGE YARD) HALF OF THE SITE. AS A SHOP DRAWING SUBMITTAL PROVIDE COMPUTER GENERATED PHOTOMETRICS ON SCALED SITE PLAN WITH LIGHT METER READINGS AT 30'x30' SPACINGS. INCLUDE MOUNTING HEIGHT, FIXTURE TYPE, LUMENS PER LIGHT FIXTURE, WATTAGE PER LIGHT FIXTURE AND AIMING COORDINATES FOR EACH. PROVIDE LIGHT METER READINGS AT THE PERIMETER FENCE AND 30'-0" BEYOND PERIMETER FENCE.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E60

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841
CROSS ENGINEERS, INC
523 MLK Jr. Way
Tacoma, WA 98405
Phone: (253) 756-0118
Job Number: 21-112
info@crossengineers.com

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — 6/14/23

SLH	6/14/23
CHECKED BY	DATE
SJK	6/14/23
PROJ. ENGR	DATE
PRINTED BY:	ScottK Jun 15, 2023
PORT ADDRESS:	ONE SITCUM PLAZA
	TACOMA, WA 98401-1837
DRAWING SCALE:	AS NOTED

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
LIGHTING CONTROL DETAILS

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID:	101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	

6688
E60
95 OF 105

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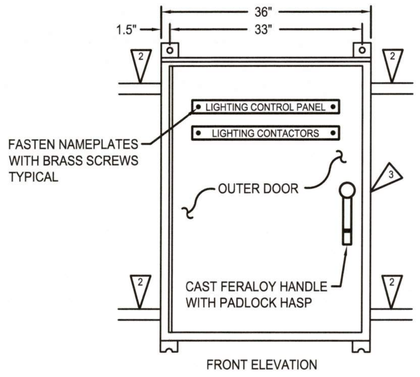
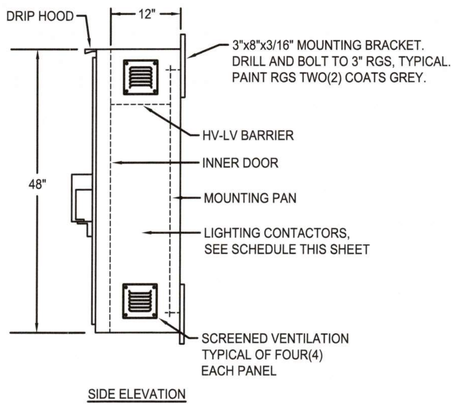
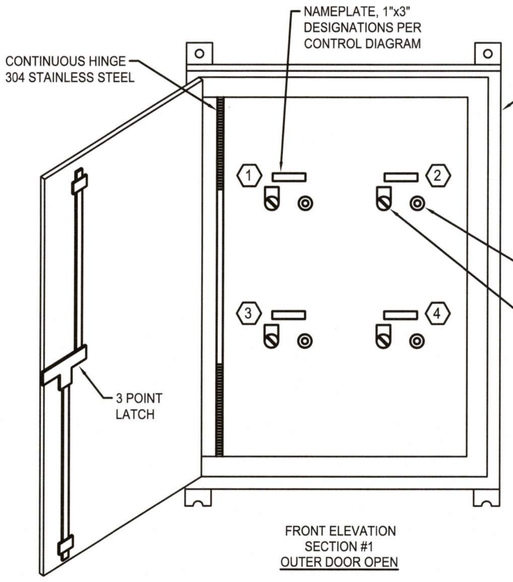


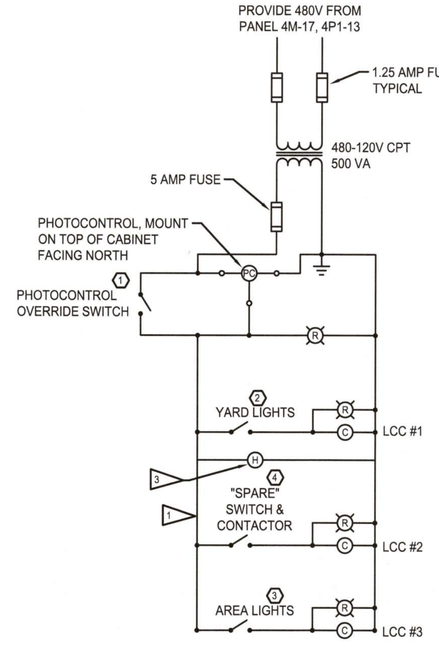




LIGHTING CONTROL PANEL AND LIGHTING CONTACTOR ENCLOSURE SHALL BE NEMA 4 CONSTRUCTION WITH SCREENED VENTILATION OPENINGS SHOWN, GASKETED, FABRICATED FROM MINIMUM 11 GAUGE STEEL. ENTIRE UNIT SHALL BE HOT DIP GALVANIZED AFTER FABRICATION AND FINISHED WITH ASA-61 LIGHT GRAY ENAMEL. ALL HARDWARE SHALL BE 304 STAINLESS STEEL EXCEPT AS NOTED.

INDICATING LIGHT SQUARE D KS/KA/KN

SELECTOR SWITCH, 2 POSITIONS, MAINTAINED SQUARE D KS/KA/KN TYPICAL OF FOUR(4).



GENERAL NOTES:

1. CONTRACTOR SHALL INCLUDE IN THE BID ALL COSTS TO HAVE DEPARTMENT OF LABOR AND INDUSTRIES APPROVED FIRM TO EVALUATE THE INSTALLATION. SAFETY AND COMPLIANCE WITH CODE AS REQUIRED PER W.A.C. 296-40-100. FOR ANY EQUIPMENT SPECIFIED OR FURNISHED THAT IS NOT UL LABELED.

ELECTRICAL NOTES:

1. PROVIDE PLASTIC WIRE CHANNEL IN CABINET FOR SEPARATION OF POWER AND CONTROL WIRING.
2. MINIMUM 1-5/8" GALVANIZED STEEL STRUT. PAINTED TWO(2) COATS GREY.
3. PROVIDE 250 WATT, 120V HEATER WITH THERMOSTAT SET TO TURN ON AT 38 DEGREES CELSIUS INTEGRAL TO PANEL.

LIGHTING CONTACTOR SCHEDULE (480V)

(1)60/3P YARD LIGHTS
(1)60/3P SPARE
(1)30/2P AREA LIGHTS

A / E61 **LIGHTING CONTROL LCA, LCB TYPICAL OF TWO(2)**
NOT TO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
933 MLK Jr Way, Tacoma, WA 98405
Phone: (253) 594-5118
Job Number: 21-112
info@crosswindpnw.com

MARK:	REVISION:	BY:	APPR:	DATE:

NEIL HUBBS 23613 REGISTERED PROFESSIONAL ENGINEER 6/14/23

SLH	6/14/23		
CHECKED BY	DATE		
SJK	6/14/23		
PROJ. ENGR	DATE		
ScottK	Jun 15, 2023		

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
LIGHTING CONTROL DETAILS

PRINTED BY: ScottK Jun 15, 2023
PORT ADDRESS:DNE SITCUM PLAZA
TACOMA, WA 98401-1837

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E
M. ID:	101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED

6688
E61
96 OF 105

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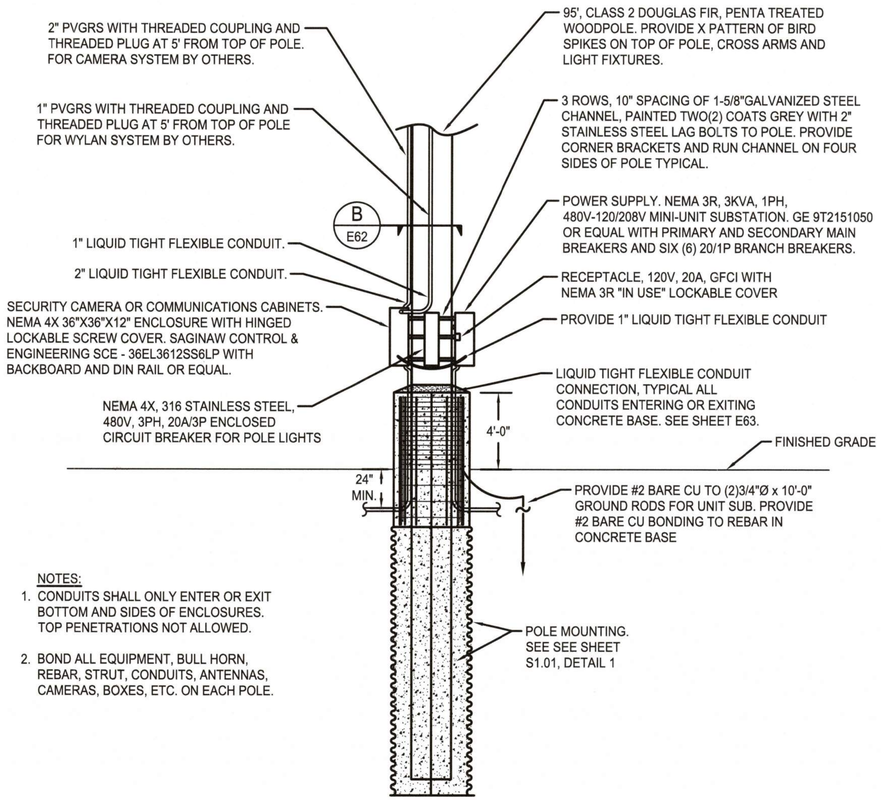
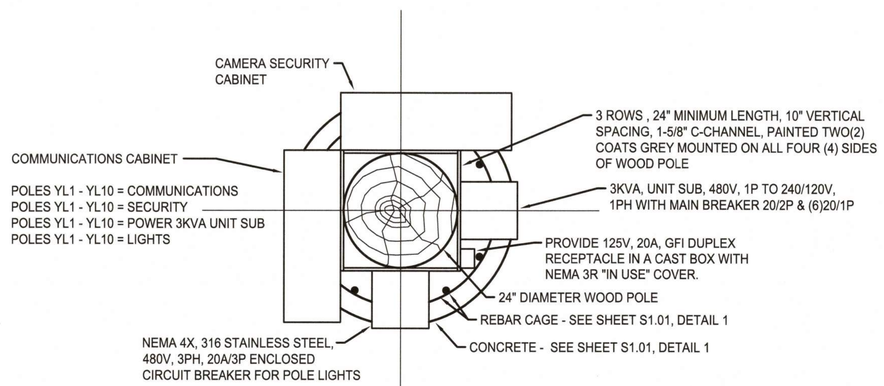
PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E61



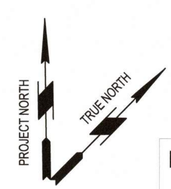
NOTES:

1. CONDUITS SHALL ONLY ENTER OR EXIT BOTTOM AND SIDES OF ENCLOSURES. TOP PENETRATIONS NOT ALLOWED.
2. BOND ALL EQUIPMENT, BULL HORN, REBAR, STRUT, CONDUITS, ANTENNAS, CAMERAS, BOXES, ETC. ON EACH POLE.

A E62 WOOD POLE LIGHTS, POWER, COMMUNICATIONS, SECURITY
NOT TO SCALE



B E62 WOOD POLE SECTION
SCALE: 3/4"=1'-0"



NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BINDING EDGE

PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E62

CROSS ENGINEERS, INC
820 MLK Jr. Way
Tacoma, WA 98405
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Phone: (253) 7382418
Job Number: 21-112

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS 23331 REGISTERED PROFESSIONAL ENGINEER
6/14/23

APPROVED:
DIRECTOR ENG. DATE

SLH	6/14/23
CHECKED BY	DATE
SJK	6/14/23
PROJ. ENGR	DATE

THORNE ROAD
THORNE ROAD PROPERTIES
POLE LIGHT/ POWER/ COMM/ SECURITY DETAILS

PRINTED BY: ScottK Jun 15, 2023			
PORT ADDRESS:DNE SITCUM PLAZA			
DRAWING SCALE: AS NOTED	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
TACOMA, WA 98401-1837	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
	PARCEL: 72, 85, & 87		

6688
E62
97 OF 105

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

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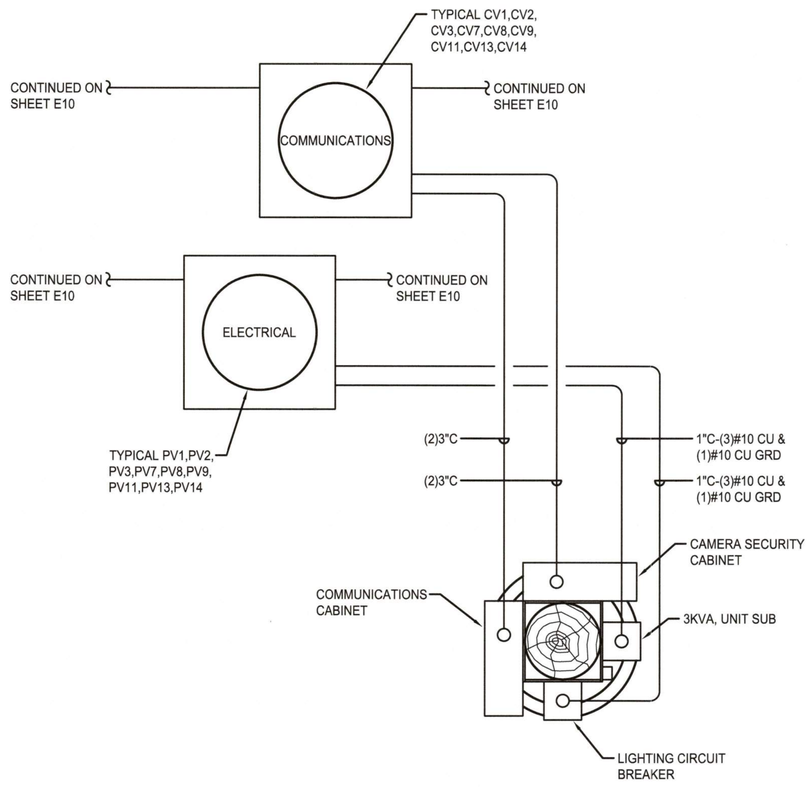
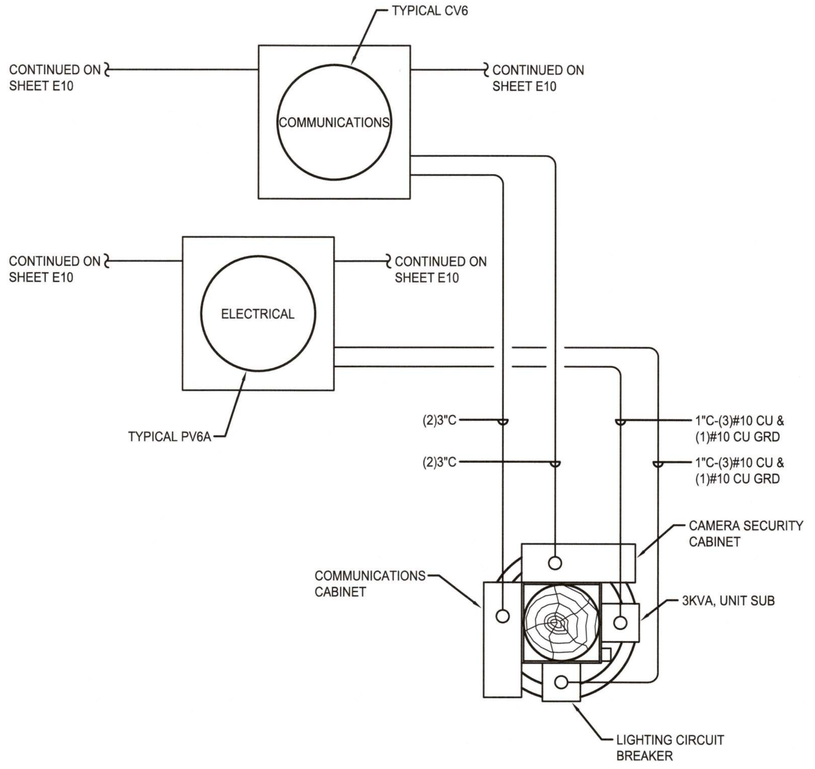
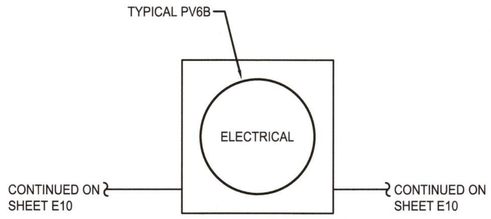


A E63 POLE/VAULT PARTIAL PLANS
SCALE: 1/2"=1'-0"
NOTE: TYPICAL YPL1-3,YLP5-8





B E63 POLE/VAULT PARTIAL PLANS
SCALE: 1/2"=1'-0"
NOTE: TYPICAL YPL4

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E63

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
933 Mc K.P. Way
Tacoma, WA 98405
info@crossengineers.com
Phone: (253) 759-5318
Job Number: 21-112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS EXPIRES 6/14/23 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON
6/14/23

APPROVED:
DIRECTOR ENG. DATE

SLH	6/14/23
CHECKED BY	DATE
SJK	6/14/23
PROJ. ENGR	DATE
PRINTED BY:	ScottK Jun 15, 2023
PORT ADDRESS:	ONE SITCUM PLAZA
	TACOMA, WA 98401-1837
DRAWING SCALE:	AS NOTED

THORNE ROAD
THORNE ROAD PROPERTIES
POLE/ VAULT DETAIL

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN
TOWNSHIP:	21N
RANGE:	3E
SECTION:	34
DAT-HRZ:	WA83-SF
VERT:	MLLW 19.39' @ Tide 22 1933
PARCEL:	72, 85, & 87

6688
E63
98 OF 105

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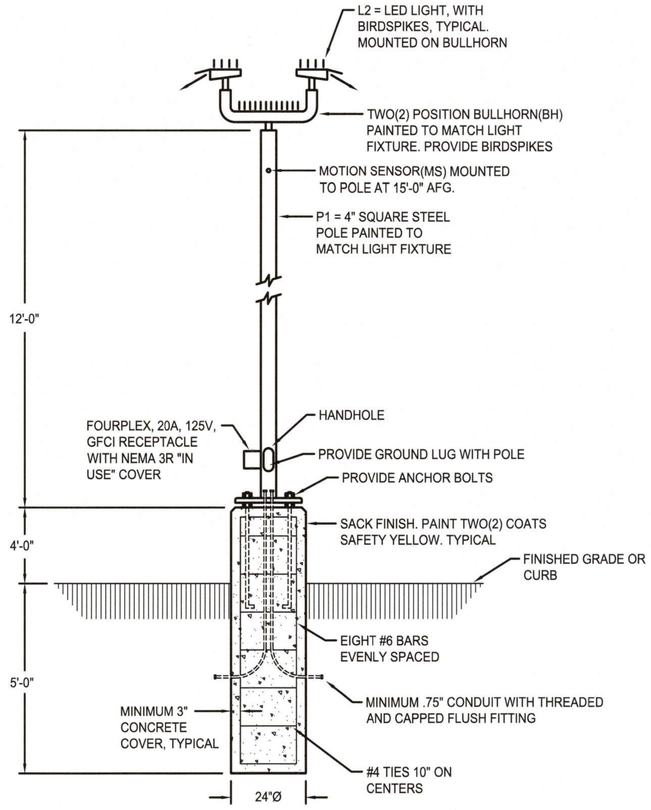
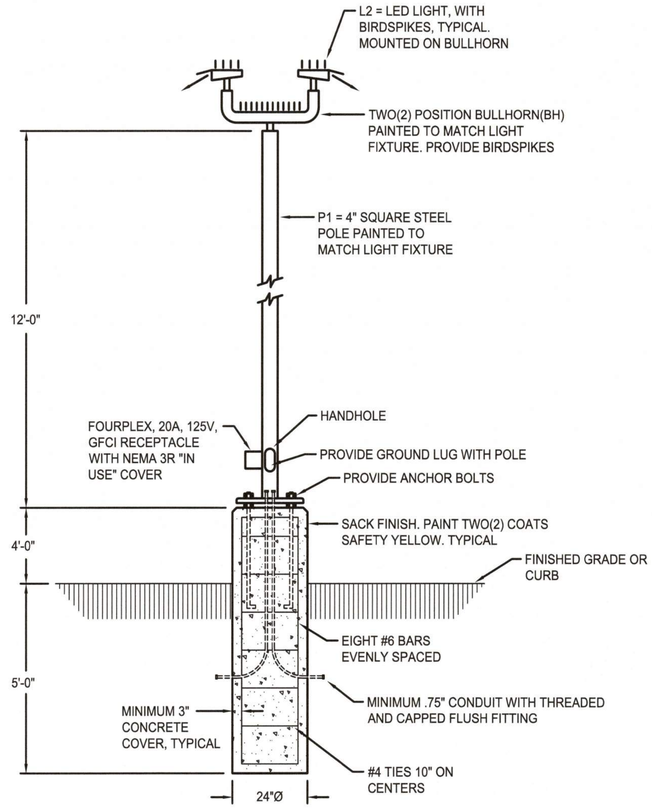


A / E64 LIGHT POLE WITH MOTION SENSOR

NOT TO SCALE

NOTE: ROUND PRECAST BASE BY OLDCASTLE PAINTED TWO(2) COATS SAFETY YELLOW OR EQUAL IS ACCEPTABLE.



B / E64 LIGHT POLE

NOT TO SCALE

NOTE: ROUND PRECAST BASE BY OLDCASTLE PAINTED TWO(2) COATS SAFETY YELLOW OR EQUAL IS ACCEPTABLE.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
933 MLK Jr. Way, Tacoma, WA 98405
Phone: (253) 759-5118
Job Number: 21-112

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — PROFESSIONAL ENGINEER — 6/14/23

APPROVED:

DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
LIGHTING POLE DETAILS

SLH 6/14/23			
CHECKED BY DATE			
SJK 6/14/23			
PROJ. ENGR DATE			
PRINTED BY: ScottK Jun 15, 2023			
PORT ADDRESS:ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			
DRAWING SCALE: AS NOTED			

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87		

6688
E64
99 OF 105

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BINDING EDGE

VAULT SCHEDULE			
ID	DESCRIPTION	LOADING	NOTES
TPUPV1	CUSTOM 15KV TACOMA POWER PADMOUNT TRANSFORMER VAULT, SELF GROUNDED, 774. REFER TO TPU STANDARDS AND REQUIREMENTS	MINIMUM 125 KIP.	①
PV6A,PV6B	CUSTOM 600V POWER VAULT, SEE DETAIL A	MINIMUM 125 KIP.	②③④
CV1 THRU CV14 PV1 THRU PV5 PV7 THRU PV14	CUSTOM POWER/COMMUNICATIONS VAULT SEE DETAIL B, THIS SHEET	MINIMUM 125 KIP.	②③④
CH1, PH1	3030-LA POWER/COMMUNICATIONS HANDHOLE	MINIMUM H30.	

GENERAL VAULT NOTES:

1. ALL CONDUITS ENTERING OR LEAVING VAULTS SHALL USE TERM-A-DUCTS. PROVIDE REMOVABLE FOAM FILL IN ALL CONDUIT OPENINGS. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS. CONTRACTOR SHALL PROVIDE CONDUIT LABELS FOR ALL CONDUITS ENTERING AND LEAVING VAULTS. PROVIDE PHENOLIC LABEL ATTACHED TO VAULT WALL WITH TWO (2) PLASTIC INSERTS AND STAINLESS STEEL SCREWS ADJACENT TO EACH CONDUIT. PHENOLIC LABEL SHALL HAVE CONDUIT ID ENGRAVED AS INDICATED ON CONDUIT AND WIRE SCHEDULE DRAWINGS E80, E81.
2. SEE SPECIFICATION SECTION 26 71 19 FOR ADDITIONAL VAULT INSTALLATION REQUIREMENTS.
3. ALL POWER CONDUCTORS, COMMUNICATIONS CABLES (FOB AND COPPER) SHALL COMPLETELY LOOP AROUND VAULT WALLS PRIOR TO EXITING VAULT.

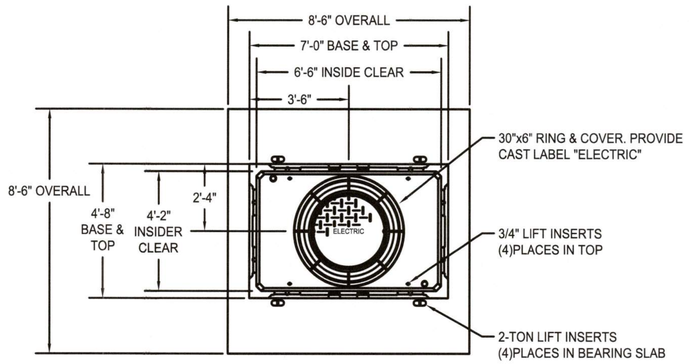
VAULT SCHEDULE NOTES:

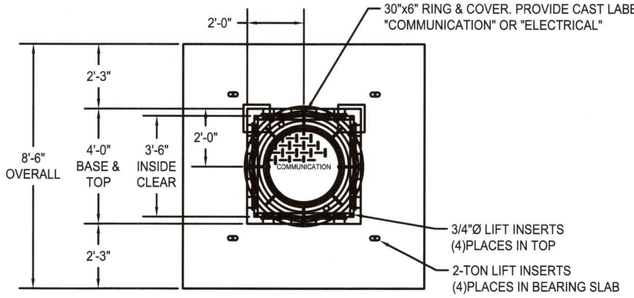
① SHOP DRAWING APPROVAL BY TPU REQUIRED.

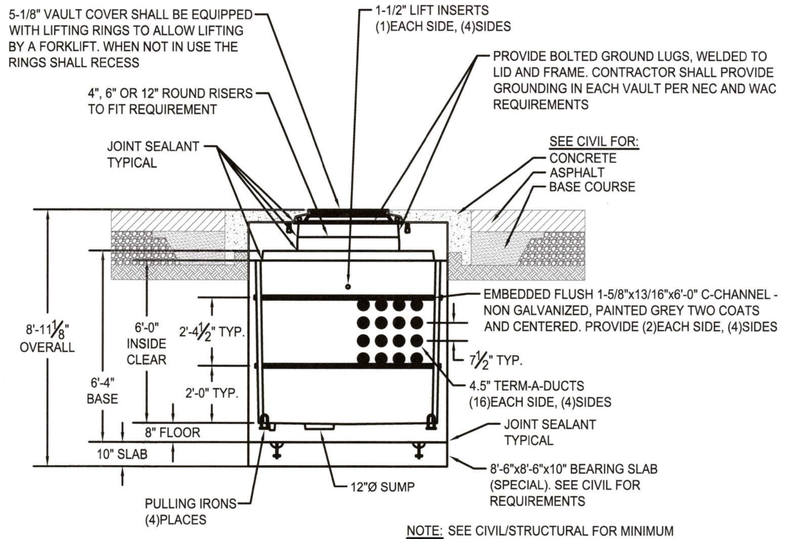
② CIVIL SHOP DRAWING REVIEW/APPROVAL REQUIRED.

③ PROVIDE FIELD STAMPED IDENTIFICATION LABEL ON EXPOSED METAL RING AND LID. LABEL SHALL MATCH VAULT IDENTIFICATION ON ELECTRICAL RECORD DRAWINGS PREPARED BY CONTRACTOR.

④ PROVIDE STENCIL PAINTED VAULT KIP RATING ON INSIDE OF VAULT DIRECTLY BELOW LID. MINIMUM 4" HIGH LETTERS.

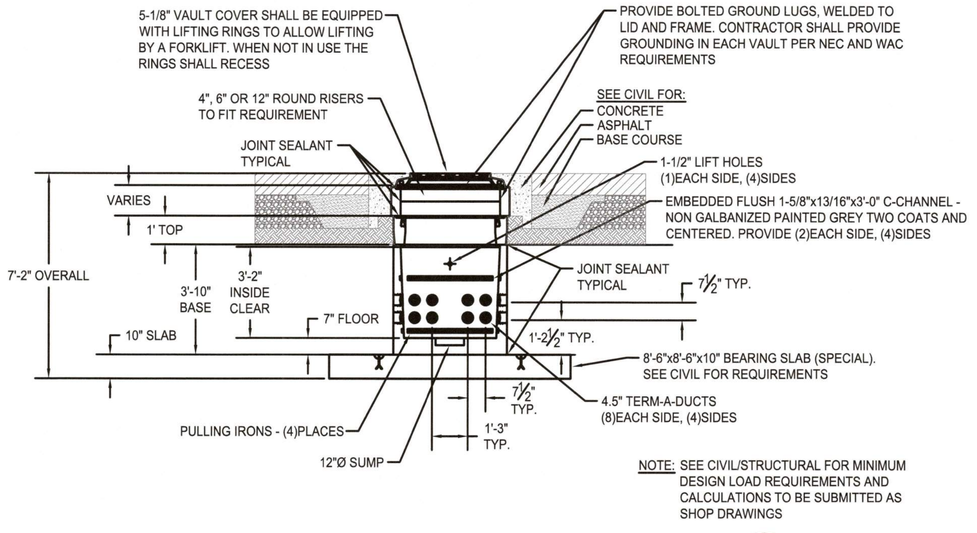






NOTE: SEE CIVIL/STRUCTURAL FOR MINIMUM DESIGN LOAD REQUIREMENTS AND CALCULATIONS TO BE SUBMITTED AS SHOP DRAWINGS

CUSTOM 577 SITE POWER VAULT (A / E70)
NOT TO SCALE



NOTE: SEE CIVIL/STRUCTURAL FOR MINIMUM DESIGN LOAD REQUIREMENTS AND CALCULATIONS TO BE SUBMITTED AS SHOP DRAWINGS

CUSTOM 444 SITE POWER/COMMUNICATIONS VAULT (B / E70)
NOT TO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

CROSS ENGINEERS, INC
923 McK.A Way, Tacoma, WA 98405
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Job Number: 21-112
info@crossengineers.com

MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L HUBBS — EXPIRES 6/14/23

APPROVED:

THORNE ROAD
THORNE ROAD PROPERTIES
SITE POWER/ COMM. VAULT DETAILS

SLH 6/14/23			
CHECKED BY DATE			
SJK 6/14/23	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
PROJ. ENGR DATE	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PRINTED BY: Scott K Jun 15, 2023	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	
PORT ADDRESS:ONE SITCUM PLAZA			
TACOMA, WA 98401-1837			

DIRECTOR ENG. DATE 6/14/23

6688
E70
100 OF 105

CONT/CONS:	071908
M. ID:	101241.01
PHASE:	100% DESIGN

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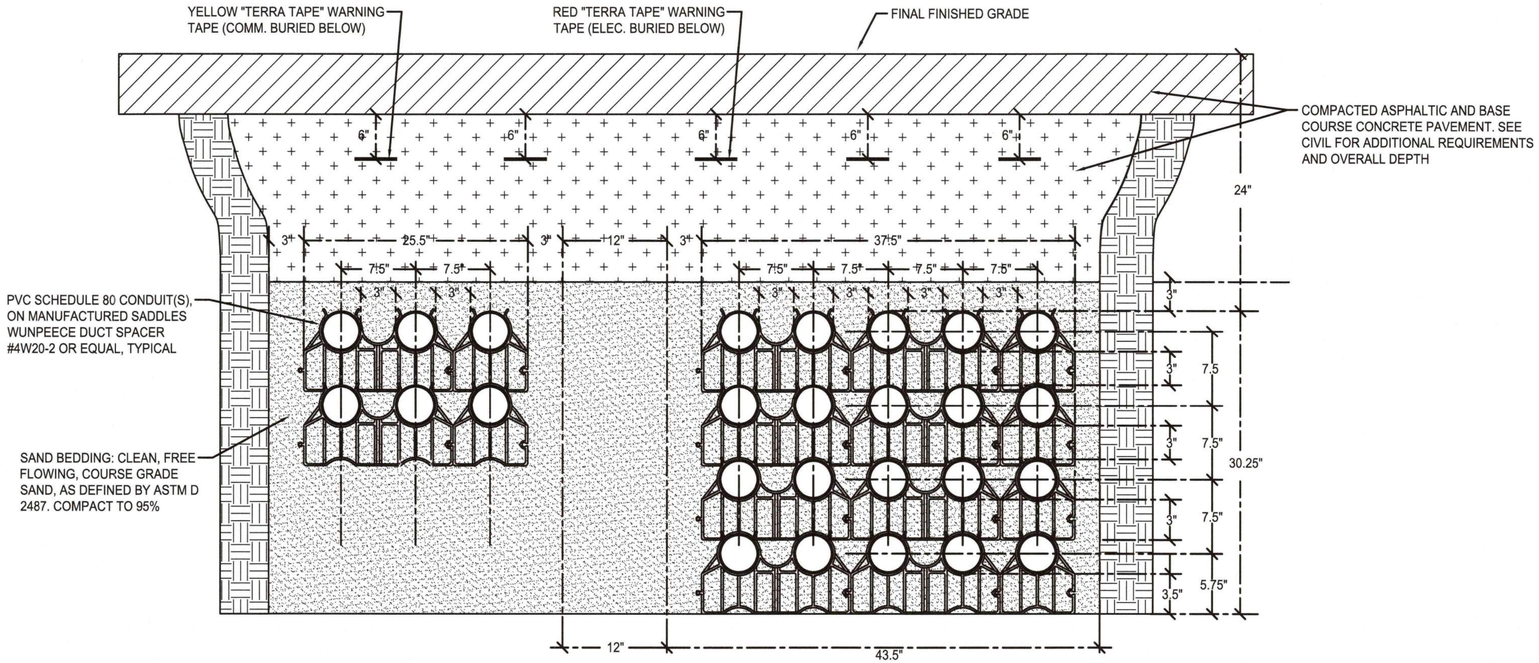

A E72 ELECTRICAL POWER DUCTBANK SECTION
NOT TO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E71

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CROSS ENGINEERS, INC
933 MLK Jr. Way
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Phone: (253) 759-5316
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MARK:	REVISION:	BY:	APPR:	DATE:

STEVEN L. HUBBS — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
6/14/23

APPROVED:
DIRECTOR ENG. DATE

SLH 6/14/23
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SJK 6/14/23
PROJ. ENGR DATE
PORT ADDRESS:DNE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD
THORNE ROAD PROPERTIES
ELECTRICAL DUCTBANK DETAIL

6688
E71
101 OF 105

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

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CONDUIT AND CONDUCTOR SCHEDULE

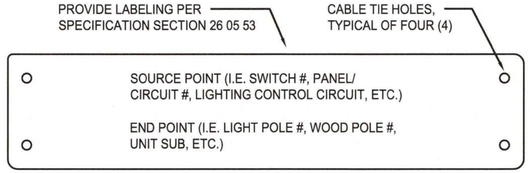
CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
TPU1	2	4"	②	-	-	-	(EX)TPU POLE #8178	TRANSFORMER VAULT SUB RWYTR-1	
SD1	1	4"	②④	4	600	600V	(EX)TPU POLE #8179	CT CAN	
SD2	1	4"	④	4	600	600V	CT CAN	PANEL 4M	
SD3	1	2"	②④	3/1	8/10	600V	PANEL 4M	PV1-US1	⑪
SD4	1	2"	②	3/1	8/10	600V	PV1	PV2-US2	⑪
SD5	1	2"	②	3/1	8/10	600V	PV2	PV3-US3	⑪
SD6	1	2"	②④	2/1	10/10	600V	PANEL 2A	GATE CONTROLLER	
SD7	1	4"	②④	-	-	-	PANEL 4M	PV4	
SD8	1	4"	②	-	-	-	PV4	PV5	
SD9	1	4"	②	-	-	-	PV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
SD10	1	1"	③④	2/1	12/12	600V	GATE CONTROLLER	FLASHING RAIL LIGHT	
SD11	1	2"	②④	2/1	8/10	600V	PANEL 2P1	PV6A	
SD12	1	2"	②	2/1	8/10	600V	PV6A	GATE CONTROLLER	
SD13	1	1"	②④	2/1	12/12	600V	GATE CONTROLLER	FLASHING RAIL LIGHT	
SD14	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P2	RP1	
SD15	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P4	RP1	
SD16	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P6	RP7	
SD17	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P8	RP7	
SD18	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P1	RP2	
SD19	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P3	RP2	
SD20	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P5	RP2	
SD21	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P7	RP3	
SD22	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P9	RP3	
SD23	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P11	RP3	
SD24	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P13	RP4	
SD25	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P15	RP4	
SD26	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P17	RP4	
SD27	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P10	RP5	
SD28	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P12	RP5	
SD29	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P14	RP5	
SD30	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P16	RP6	
SD31	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P18	RP6	
SD32	1	3"	②	3/1	4/0/4	600V	RWYTR-1,P20	RP6	
SD33	1	3"	②	4/1	4/0/4	600V	RWYTR-1,P33	PV10	
SD34	1	3"	②	4/1	4/0/4	600V	PV10	PV11	
SD35	1	3"	②	4/1	4/0/4	600V	PV11	PV12	
SD36	1	3"	②	4/1	4/0/4	600V	PV12	GUARD SHACK	
SD37	1	1"	②	2/1	12/12	600V	PANEL 2P2	LP10	
SD38	5	3"	②	3/1	4/0/4	600V	RWYTR-1,P22,24,26,28,30	PV6A	
SD39	9	3"	②	3/1	4/0/4	600V	RWYTR-1,P30,32,21,23,25,27,29,31,33	PV6B	
SD40	1	3"	②	3/1	4/0/4	600V	PV6A	RB1	
SD41	1	3"	②	3/1	4/0/4	600V	RB1	RB2	
SD42	1	3"	②	3/1	4/0/4	600V	PV6A	RB3	
SD43	1	3"	②	3/1	4/0/4	600V	RB3	RB4	
SD44	1	3"	②	3/1	4/0/4	600V	PV6A	RB5	
SD45	1	3"	②	3/1	4/0/4	600V	RB5	RB6	
SD46	1	3"	②	3/1	4/0/4	600V	PV6A	RB7	
SD47	1	3"	②	3/1	4/0/4	600V	RB7	RB8	
SD48	1	3"	②	3/1	4/0/4	600V	PV6A	RB9	
SD49	1	3"	②	3/1	4/0/4	600V	RB9	RB10	
SD50	1	3"	②	3/1	4/0/4	600V	PV6B	RB11	
SD51	1	3"	②	3/1	4/0/4	600V	RB11	RB12	
SD52	1	3"	②	3/1	4/0/4	600V	PV6B	RB13	
SD53	1	3"	②	3/1	4/0/4	600V	RB13	RB14	
SD54	1	3"	②	3/1	4/0/4	600V	PV6B	RB15	
SD55	1	3"	②	3/1	4/0/4	600V	RB15	RB16	
SD56	1	3"	②	3/1	4/0/4	600V	PV6B	RB17	
SD57	1	3"	②	3/1	4/0/4	600V	RB17	RB18	
SD58	1	3"	②	3/1	4/0/4	600V	PV6B	RB19	
SD59	1	3"	②	3/1	4/0/4	600V	RB19	RB20	
SD60	1	3"	②	3/1	4/0/4	600V	PV6B	RB21	
SD61	1	3"	②	3/1	4/0/4	600V	RB21	RB22	
SD62	1	3"	②	3/1	4/0/4	600V	PV6B	RB23	
SD63	1	3"	②	3/1	4/0/4	600V	RB23	RB24	
SD64	1	3"	②	3/1	4/0/4	600V	PV6B	RB25	⑪
SD65	1	2"	②④	8/4	6/10	600V	PANEL 4P1	PV6A - US4	⑫
SD66	1	2"	②	6/3	6/10	600V	PV6A	PV7 - US5	⑪
SD67	1	2"	②	4/2	6/10	600V	PV7	PV8 - US6	⑪
SD68	1	2"	②	2/1	6/10	600V	PV8	PV9 - US7	
SD69	1	2"	②④	6/3	6/10	600V	PANEL 4P1	PV10	⑪
SD70	1	2"	②	6/3	6/10	600V	PV10	PV11 - US8	
SD71	1	2"	②	4/2	6/10	600V	PV11	PV12	
SD72	1	2"	②	4/2	6/10	600V	PV12	PV13 - US9	⑪
SD73	1	2"	②	2/1	6/10	600V	PV13	PV14 - US10	⑪

SCHEDULE ABBREVIATION LEGEND:

C	=	COMMUNICATIONS	SDV	=	SECONDARY POWER VAULT
CV	=	COMMUNICATIONS VAULT	YL	=	YARD LIGHTING
FOB	=	FIBER OPTIC	AL	=	AREA LIGHTING
SD	=	SECONDARY 600V DISTRIBUTION	SP	=	SPARE CONDUIT
SC	=	SECURITY CAMERAS	TPU	=	TACOMA PUBLIC UTILITIES
			WPC	=	WHERE-PORT COMMUNICATIONS
			US	=	UNIT SUB TRANSFORMER ON YARD LIGHTING (YL) POLE

SCHEDULE NOTES:

1. RED DYE CONCRETE ENCASE.
2. PVC SCHEDULE 80
3. 13.8KV CABLE FOR TPU
4. PVC COATED GRS CONDUIT
5. STUB AND CAP 12" ABOVE FINISHED GRADE.
6. PROVIDE MAXCELL EDGE DETECTABLE 3 CELL INNER DUCT. MAXCELL MXC2003 OR EQUAL EACH CONDUIT.
7. PROVIDE OUTSIDE PLANT (OSP), 24 FIBER COUNT, LOOSE TUBE, SINGLE JACKET FIBER CABLE. POT CONTRACTOR NIC.
8. PROVIDE (5)CAT 6 CABLES IN ONE CELL OF INNERDUCT.
9. REVIEW AND COORDINATE POWER CONNECTION WITH GATE ARM MANUFACTURER. COMMUNICATION'S WIRING BY OTHERS. SEE CIVIL.
10. PROVIDE FINGER SPLICE ON BOTH CABLE ENDS FOR CIRCUIT BREAKER AND PANEL TERMINATIONS.
11. SEE DETAIL A AND B, SHEET E6.3 FOR CONDUIT/CONDUCTOR REQUIREMENTS BETWEEN PV VAULT AND UNIT SUB MOUNTED ON LIGHT POLE.
12. SEE DETAIL A AND B, SHEET E6.3 FOR CONDUIT/CONDUCTOR REQUIREMENTS BETWEEN PV VAULT AND YARD LIGHT POLE LIGHTING CIRCUIT BREAKER MOUNTED ON POLE.



CONDUCTOR IDENTIFICATION LABEL (A / E80)
NOT TO SCALE

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

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Phone: (253) 759-5318
Job Number: 21-112
info@crossengineers.com

STEVEN L. HUBBS — 21331 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 6/14/23

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
THORNE ROAD PROPERTIES
CONDUIT AND CONDUCTOR SCHEDULE

SLH	6/14/23		
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PORT ADDRESS:	DNE SITCUM PLAZA		
	TACOMA, WA 98401-1837		

6688
E80
102 OF 105

CONT/CONS:	071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	DRAWING SCALE: AS NOTED
M. ID:	101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933		
PHASE:	100% DESIGN	PARCEL: 72, 85, & 87			

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PORT OF TACOMA FILE: N:\Jobs\2021\21-112\Dwgs\21-112-E80

BINDING EDGE

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
AL1	1	1"	2 4	2/1	10/10	600V	LCA CONTROLLER	LP1	
AL2	1	1"	2 4	2/1	10/10	600V	LCB CONTROLLER	LP3	
AL3	1	1"	2	2/1	10/10	600V	LP3	LP4	
AL4	1	1"	2	2/1	10/10	600V	LP4	LP5	
AL5	1	1"	2	2/1	10/10	600V	LP5	LP6	
AL6	1	1"	2	2/1	10/10	600V	LP6	LP7	
AL7	1	1"	2	2/1	10/10	600V	LP7	LP8	
AL8	1	1"	2	2/1	10/10	600V	LP8	LP9	
AL9	1	1"	2	2/1	8/10	600V	LP3	PV6A	
AL10	1	1"	2	2/1	8/10	600V	PV6A	LP2	
C1	1	4"	2 4	-	-	-	(EX)TPU POLE #31593	COMMUNICATIONS CABINET #1	
C2	1	4"	2 4	-	-	-	(EX)TPU POLE #31593	SECURITY CAMERA CABINET #1	
C3	1	2"	2 4	-	-	-	SECURITY CAMERA CABINET #1	CV1	
C4	1	2"	2	-	-	-	CV1	CV2	
C5	1	2"	2	-	-	-	CV2	CV3	
C6	1	2"	2 4	-	-	-	COMMUNICATIONS CABINET #1	CV1	
C7	1	2"	2	-	-	-	CV1	CV2	
C8	1	2"	2	-	-	-	CV2	CV3	
C9	1	2"	2 4	-	-	-	SECURITY CAMERA CABINET #1	CV4	
C10	1	2"	2 4	-	-	-	COMMUNICATIONS CABINET #1	CV4	
C11	1	2"	2	-	-	-	CV4	CV5	
C12	1	2"	2	-	-	-	CV4	CV5	
C13	1	2"	2	-	-	-	CV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
C14	1	2"	2	-	-	-	CV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
C15	1	2"	2 4	-	-	-	SECURITY CAMERA CABINET #2	CV6	
C16	1	2"	2 4	-	-	-	COMMUNICATIONS CABINET #2	CV6	
C17	1	4"	2 4	-	-	-	(EX)TPU POLE #26517	CV6	
C18	1	4"	2 4	-	-	-	(EX)TPU POLE #26517	CV6	
C19	1	2"	2	-	-	-	CV6	CV7	
C20	1	2"	2	-	-	-	CV6	CV7	
C21	1	2"	2	-	-	-	CV7	CV8	
C22	1	2"	2	-	-	-	CV7	CV8	
C23	1	2"	2	-	-	-	CV8	CV9	
C24	1	2"	2	-	-	-	CV8	CV9	
C25	1	2"	2 4	-	-	-	SECURITY CAMERA CABINET #2	CV10	
C26	1	2"	2 4	-	-	-	COMMUNICATIONS CABINET #2	CV10	
C27	1	2"	2	-	-	-	CV10	CV11	
C28	1	2"	2	-	-	-	CV10	CV11	
C29	1	2"	2	-	-	-	CV11	CV12	
C30	1	2"	2	-	-	-	CV11	CV12	
C31	1	2"	2	-	-	-	CV12	GUARD SHACK SECURITY	
C32	1	2"	2	-	-	-	CV12	GUARD SHACK COMMUNICATIONS	
C33	1	2"	2	-	-	-	CV12	CV13	
C34	1	2"	2	-	-	-	CV12	CV13	
C35	1	2"	2	-	-	-	CV13	CV14	
C36	1	2"	2	-	-	-	CV13	CV14	
C37	1	4"	2 4	-	-	-	(EX)TPU POLE #8178	COMMUNICATIONS CABINET #2	
C38	1	4"	2 4	-	-	-	(EX)TPU POLE #8178	SECURITY CAMERA CABINET #2	

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT ID	CONDUIT NO.	CONDUIT SIZE	CONDUIT TYPE	CONDUCTORS PER CONDUIT NO.	CONDUCTORS PER CONDUIT SIZE	CONDUCTORS PER CONDUIT TYPE	FROM	TO	REMARKS
SP1	2	2"	2 4	-	-	-	PANEL 4M	PV1	
SP2	1	2"	2 4	-	-	-	LCA	PV1	
SP3	2	2"	2 4	-	-	-	SECURITY CAMERA CABINET #1	PV1	
SP4	2	2"	2 4	-	-	-	COMMUNICATIONS CABINET #1	PV1	
SP5	2	2"	2	-	-	-	PV1	PV2	
SP6	2	2"	2	-	-	-	CV1	CV2	
SP7	2	2"	2	-	-	-	PV2	PV3	
SP8	2	2"	2	-	-	-	CV2	CV3	
SP9	2	2"	2 4	-	-	-	PANEL 4M	CV4	
SP10	2	2"	2 4	-	-	-	SECURITY CAMERA CABINET #1	CV4	
SP11	2	2"	2 4	-	-	-	COMMUNICATIONS CABINET #1	CV4	
SP12	2	2"	2	-	-	-	PV4	PV5	
SP13	2	2"	2	-	-	-	CV4	CV5	
SP14	2	2"	2	-	-	-	CV4	CV5	
SP15	2	2"	2	-	-	-	PV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
SP16	1	2"	2	-	-	-	CV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
SP17	1	2"	2	-	-	-	CV5	FUTURE CHASSIS REPAIR SHELTER - STUB AND CAP	
SP18	2	2"	2 4	-	-	-	SECURITY CAMERA CABINET #2	CV6	
SP19	2	2"	2 4	-	-	-	COMMUNICATIONS CABINET #2	CV6	
SP20	2	2"	2	-	-	-	CV6	CV7	
SP21	2	2"	2	-	-	-	CV7	CV8	
SP22	2	2"	2	-	-	-	CV8	CV9	
SP23	1	2"	2 4	-	-	-	SECURITY CAMERA CABINET #2	CV10	
SP24	1	2"	2 4	-	-	-	COMMUNICATIONS CABINET #2	CV10	
SP25	2	2"	2	-	-	-	CV10	CV11	
SP26	2	2"	2	-	-	-	CV11	CV12	
SP27	1	2"	2	-	-	-	CV12	GUARD SHACK STUB	
SP28	2	2"	2	-	-	-	SWITCHBOARD RWYTR-1	PV10	
SP29	2	2"	2	-	-	-	PV10	PV11	
SP30	2	2"	2	-	-	-	PV11	PV12	
SP31	2	2"	2	-	-	-	PV12	GUARD SHACK STUB	
SP32	1	2"	2	-	-	-	PV10	PH1	
SP33	2	3"	2	-	-	-	RWYTR-1	PV6A	
SP34	2	3"	2	-	-	-	RWYTR-1	PV6B	
SP35	2	2"	2	-	-	-	PV6A	PV7	
SP36	2	2"	2	-	-	-	PV7	PV8	
SP37	2	2"	2	-	-	-	PV8	PV9	
SP38	2	2"	2	-	-	-	CV12	CV13	
SP39	2	2"	2	-	-	-	PV12	PV13	
SP40	2	2"	2	-	-	-	CV13	CV14	
SP41	2	2"	2	-	-	-	PV13	PV14	
SP42	1	2"	2	-	-	-	CV10	CH1	
YL1	1	2"	2 4	3/1	8/10	600V	LCA	PV1	(12)
YL2	1	2"	2	3/1	8/10	600V	PV1	PV2	(13)
YL3	1	2"	2	3/1	8/10	600V	PV2	PV3	(14)
YL4	1	2"	2 4	3/1	8/10	600V	LCB	PV6A	(15)
YL5	1	2"	2	3/1	8/10	600V	PV6A	PV7	(16)
YL6	1	2"	2	3/1	8/10	600V	PV7	PV8	(17)
YL7	1	2"	2	3/1	8/10	600V	PV8	PV9	(18)
YL8	1	2"	2 4	3/1	8/10	600V	LCB	PV10	(19)
YL9	1	2"	2	3/1	8/10	600V	PV10	PV11	
YL10	1	2"	2	3/1	8/10	600V	PV11	PV12	
YL11	1	2"	2	3/1	8/10	600V	PV12	PV13	(12)
YL12	1	2"	2	3/1	8/10	600V	PV13	PV14	(13)

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

CROSS ENGINEERS, INC
535 Mildred Way
Tacoma, WA 98465
Phone: (253) 754-5115
Job Number: 21-112

STEVEN L. HUBBS — EXPIRES 6/14/23 — PROFESSIONAL ENGINEER

APPROVED:
DIRECTOR ENG. DATE 6/14/23

SLH	6/14/23		
CHECKED BY	DATE		
SJK	6/14/23		
PROJ. ENGR	DATE		

PRINTED BY: ScottK Jun 15, 2023 7:38
PORT ADDRESS:NE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD
THORNE ROAD PROPERTIES
CONDUIT AND CONDUCTOR SCHEDULE

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ: WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
E81
103 OF 105

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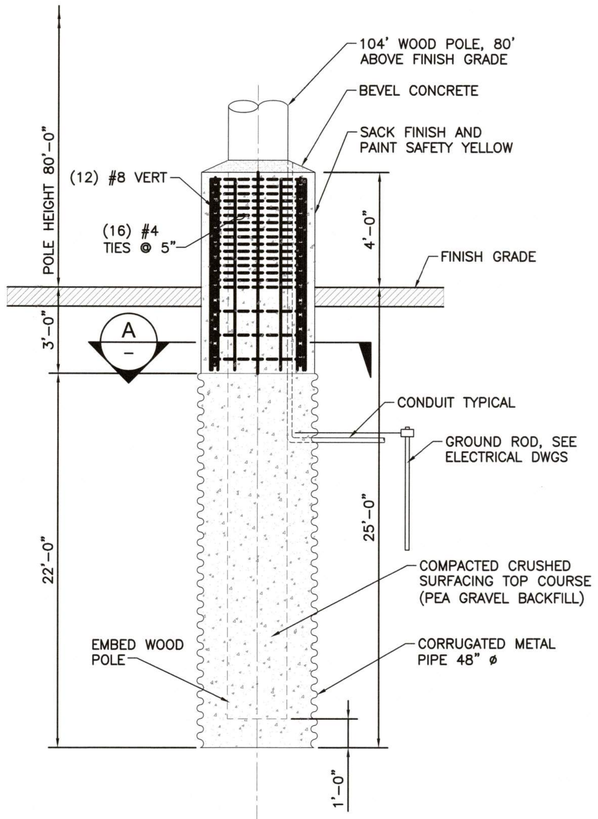
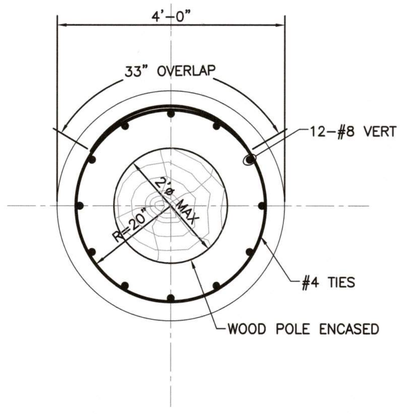


1 / – **80' LIGHT POLE FOUNDATION DETAIL**
SCALE: 3/8" = 1'-0"

BUILDING PERMIT NOTE:

1. LIGHT POLE FOUNDATION WILL REQUIRE BUILDING PERMIT SEPARATE FROM THE SITE DEVELOPMENT REVIEW. CONTRACTOR SHALL OBTAIN BUILDING PERMIT PRIOR TO CONSTRUCTION OF THE LIGHT POLES.



A / – **SECTION**
SCALE: 3/4" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0"
SCALE: 3/8"=1'-0"

2'-0" 0'-0" 1'-0" 2'-0"
SCALE: 3/4"=1'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206) 622-2022

MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:
DIRECTOR ENG. DATE

THORNE ROAD
OFF DOCK CONTAINER YARD
POLE FOUNDATIONS

EK 4/3/2025
CHECKED BY DATE
JT 4/2/2025
PROJ. ENGR DATE
jtodd Apr 03, 2025

PRINTED BY:
PORT ADDRESS:

TOWNSHIP: 21N	RANGE: 3E	SECTION: 34	
DAT-HRZ:	VERT:		
PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED		

CONT/CONS: 071908
M. ID: 1012241.01
PHASE: 100% DESIGN

6688
S1.01
104 OF 105

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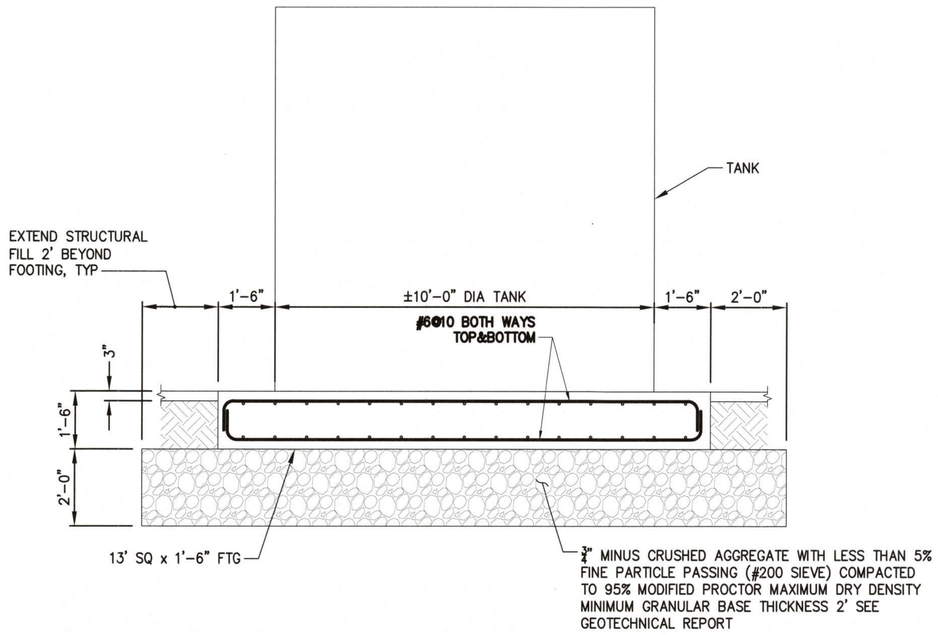


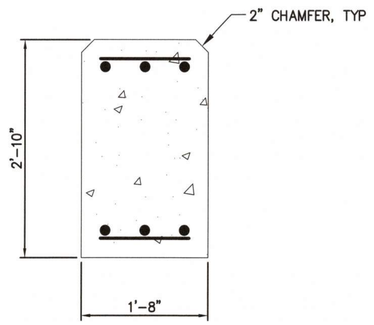
1 / C2.06 **10' DIA 5500 GALLON WATER TANK FOUNDATION**
SCALE: 1/2" = 1'-0"

BUILDING PERMIT NOTE:

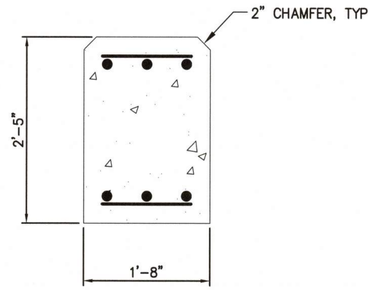
1. TANK FOUNDATION WILL REQUIRE BUILDING PERMIT SEPARATE FROM THE SITE DEVELOPMENT REVIEW. CONTRACTOR SHALL OBTAIN BUILDING PERMIT PRIOR TO CONSTRUCTION OF THE FOUNDATION.

NOTE:

1. COORDINATE GROUNDING REQUIREMENTS WITH ELEC PRIOR TO CONCRETE POUR.
2. WATER TANK TIEDOWN/ANCHOR DESIGN BY SUPPLIER



2 / C2.07 **CURB DETAIL**
SCALE: 1" = 1'-0"



3 / C2.07 **CURB DETAIL**
SCALE: 1" = 1'-0"

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

1'-0" 0'-0" 1'-0" 2'-0"
SCALE: 1"=1'-0"

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

moffatt & nichol
600 UNIVERSITY STREET SUITE# 610 SEATTLE, WA 98101 (206)622-2222

EK	4/3/2025		
CHECKED BY	DATE		
JT	4/2/2025		
PROJ. ENGR	DATE		
jtodd Apr 03, 2025			

APPROVED:
DIRECTOR ENG. DATE
PRINTED BY: jtodd Apr 03, 2025
PORT ADDRESS:

THORNE ROAD
OFF DOCK CONTAINER YARD
STRUCTURAL DETAILS

CONT/CONS: 071908	TOWNSHIP: 21N	RANGE: 3E	SECTION: 34
M. ID: 101241.01	DAT-HRZ:	VERT:	
PHASE: 100% DESIGN	PARCEL: 72, 85, & 87	DRAWING SCALE: AS NOTED	

6688
S1.02
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Plotted By: Todd, James 8/25/2025 10:16 AM

THORNE ROAD

OFF DOCK CONTAINER YARD

TACOMA, WASHINGTON

ELEVATION DATUM:
MEAN LOWER LOW WATER (MLLW);
CONVERSION: MLLW DATUM MINUS 5.96' = NGVD 29 CITY OF TACOMA DATUM

HORIZONTAL DATUM:
NAD 83 (2011)

CONVERSION: PORT OF TACOMA DATUM MINUS N 0.22, E 0.00 = NAD 83/91 CITY OF TACOMA DATUM. SEE THREE CITY OF TACOMA MONUMENTS ON SHEET WO-17

SPECIAL TRAFFIC CONTROL REQUIREMENTS:

1. A MINIMUM OF ONE 20-FOOT WIDE ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES AT ALL TIMES.
2. THREE (3) WORKING DAYS PRIOR TO ANY STREET OR LANE CLOSURE, THE CONTRACTOR SHALL NOTIFY:

TACOMA PUBLIC WORKS ENGINEERING DIVISION	(253) 591-5500
TACOMA PUBLIC WORKS STREETS AND GROUNDS	(253) 591-5495
TACOMA PUBLIC WORKS SOLID WASTE	(253) 591-5544
TACOMA FIRE DEPARTMENT	(253) 591-5733
TACOMA POLICE DEPARTMENT	(253) 591-5951
LESA COMMUNICATION CENTER	(253) 798-4721 OPT. #3

3. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY THE TACOMA PUBLIC WORKS, ENGINEERING DIVISION, PRIOR TO BEGINNING ANY WORK ON CITY RIGHT OF WAY.

GENERAL CONSTRUCTION SEQUENCE:

1. HOLD AND ATTEND PRE-CONSTRUCTION MEETING WITH THE CITY OF TACOMA CONSTRUCTION DIVISION AND BUILDING AND LAND USE SERVICE, TACOMA POWER, TACOMA WATER, PORT OF TACOMA, ENGINEER AND OTHERS AS APPLICABLE PRIOR TO COMMENCEMENT OF WORK.
2. STAKE PROJECT LIMITS PRIOR TO BEGINNING CONSTRUCTION.
3. WHEN COMPLETED CONTACT CITY INSPECTOR FOR FINAL APPROVAL.

THIS WORK ORDER DRAWING SET IS ALSO UNDER REVIEW BY CITY OF TACOMA SITE DEVELOPMENT AS PERMIT SDEV23-0193.

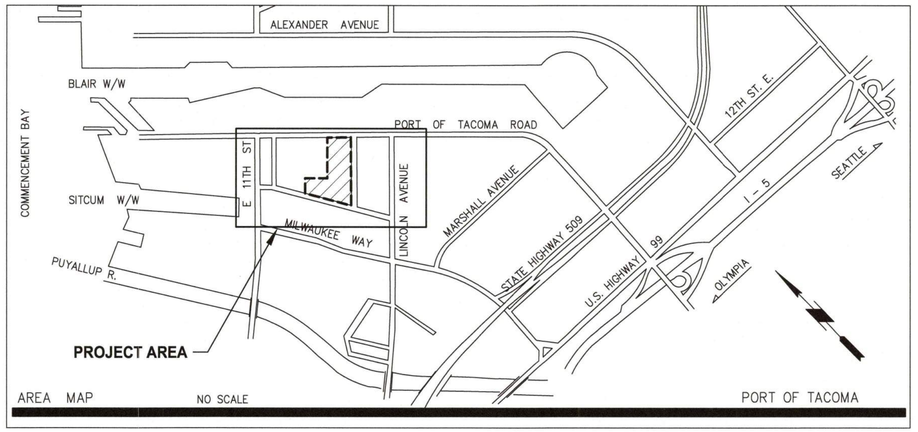
4. RIGHTS OF WAY RESTORATION SHALL BE PER THE POLICY AS ADOPTED BY THE CITY AUGUST 2017. THE CITY OF TACOMA INSPECTOR SHALL HAVE FINAL DIRECTION FOR LIMITS OF RESTORATION.
5. SEE SHEETS WO-16 AND WO-17 FOR BENCHMARK AND SITE SURVEY DATA.

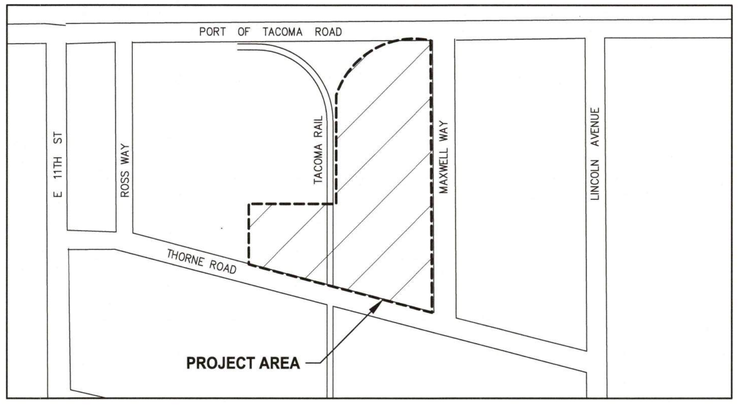
PROJECT CONTACT INFORMATION

OWNER - PORT OF TACOMA
NORMAN GILBERT, P.E.
PROJECT MANAGER II
PHONE: (253).383-9406
ONE SITCUM PLAZA, TACOMA, WA 98421
EMAIL: NGILBERT@PORTOFTACOMA.COM

CONSULTING ENGINEERS - MOFFATT & NICHOL
JAMES TODD, P.E.
505 S 336TH STREET, STE 510, FEDERAL WAY, WA 98003
PHONE: (206) 622-0222
EMAIL: JTODD@MOFFATTNICHOL.COM

OTHER CONSULTANTS:
KENNEDY JENKS & CROSS ENGINEERS





ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

DRAWING INDEX		
INDEX #	SHEET NUMBER	SHEET TITLE
1	WO-01	COVER SHEET AND SHEET INDEX
2	WO-02	DEMOLITION PLAN – SHEET 1
3	WO-03	DEMOLITION PLAN – SHEET 2
4	WO-04	DEMOLITION PLAN – SHEET 3
5	WO-05	SITE PLAN & GUTTER PROFILE – SHEET 1
6	WO-06	SITE PLAN & GUTTER PROFILE – SHEET 2
7	WO-07	SITE PLAN & GUTTER PROFILE – SHEET 3
8	WO-08	SITE PLAN & GUTTER PROFILE – SHEET 4
9	WO-09	SITE PLAN & GUTTER PROFILE – SHEET 5
10	WO-10	SITE PLAN & GUTTER PROFILE – SHEET 6
11	WO-11	DETAILS 1 OF 5
12	WO-12	DETAILS 2 OF 5
13	WO-13	DETAILS 3 OF 5
14	WO-14	DETAILS 4 OF 5
15	WO-15	DETAILS 5 OF 5
16	WO-16	ALIGNMENT AND BENCHMARK DATA
17	WO-17	SITE SURVEY DATA
18	WO-18	TRUCK TURNING PATHS
19	WO-19	ROAD FRONTAGE TESC PLAN
20	WO-20	ROAD FRONTAGE TESC NOTES AND DETAILS
21	WO-21	ROAD FRONTAGE STORMWATER SITE PLAN, KEY MAP, AND GENERAL NOTES
22	WO-22	ROAD FRONTAGE STORMWATER ENLARGED PLAN 01
23	WO-23	ROAD FRONTAGE STORMWATER ENLARGED PLAN 02
24	WO-24	ROAD FRONTAGE STORM DRAIN LATERAL TYPICAL SECTION
25	WO-25	ROAD FRONTAGE STORMWATER DETAILS 01
26	WO-26	ROAD FRONTAGE STORMWATER DETAILS 02
27	WO-27	ROAD FRONTAGE STORMWATER DETAILS 03
28	WO-28	STORMWATER LATERAL PROFILE 01
29	WO-29	STORMWATER LATERAL PROFILE 02
30	WO-E1	PARTIAL ELECTRICAL STREET LIGHTING PLAN
31	WO-E2	PARTIAL ELECTRICAL STREET LIGHTING PLAN
32	WO-E3	PARTIAL STREET LIGHTING PHOTOMETRIC PLAN
33	WO-E4	PARTIAL STREET LIGHTING PHOTOMETRIC PLAN
34	WO-E5	STREET LIGHTING POWER RISER DIAGRAM
35	WO-E6	STREET LIGHTING DETAILS
36	WO-E7	STREET LIGHTING DETAILS
37	WO-L1	LANDSCAPE PLAN–SHEET 1
38	WO-L2	LANDSCAPE PLAN–SHEET 2
39	WO-L3	LANDSCAPE PLAN–SHEET 3
40	WO-L4	LANDSCAPE NOTES AND DETAILS
41	WO-L5	LANDSCAPE NOTES AND DETAILS
42	WO-D1	TACOMA DETAILS
43	WO-D2	TACOMA DETAILS
44	WO-D3	TACOMA DETAILS
45	WO-D4	TACOMA DETAILS
46	WO-GN	GENERAL NOTES

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

STATE OF WASHINGTON · JAMES A. TODD · 53342 · REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
COVER SHEET AND SHEET INDEX

WO23-0096
WO-01
SHEET NO. 1 OF 45

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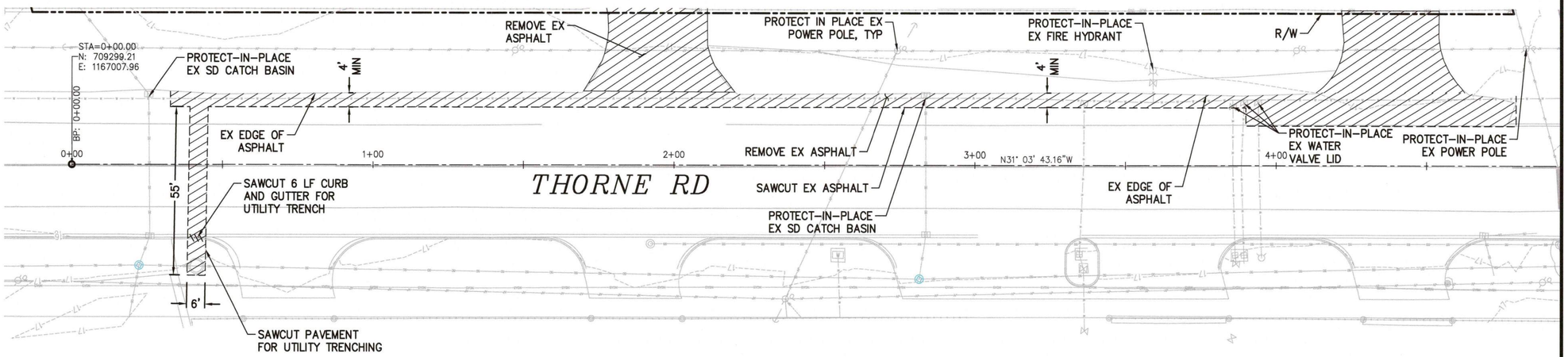
Plotted By: Todd, James 6/6/2025 1:09 PM

LEGEND

- SAWCUT
- REMOVE EX PAVEMENT
- GRIND AND OVERLAY
- GRADING LIMITS
- R/W

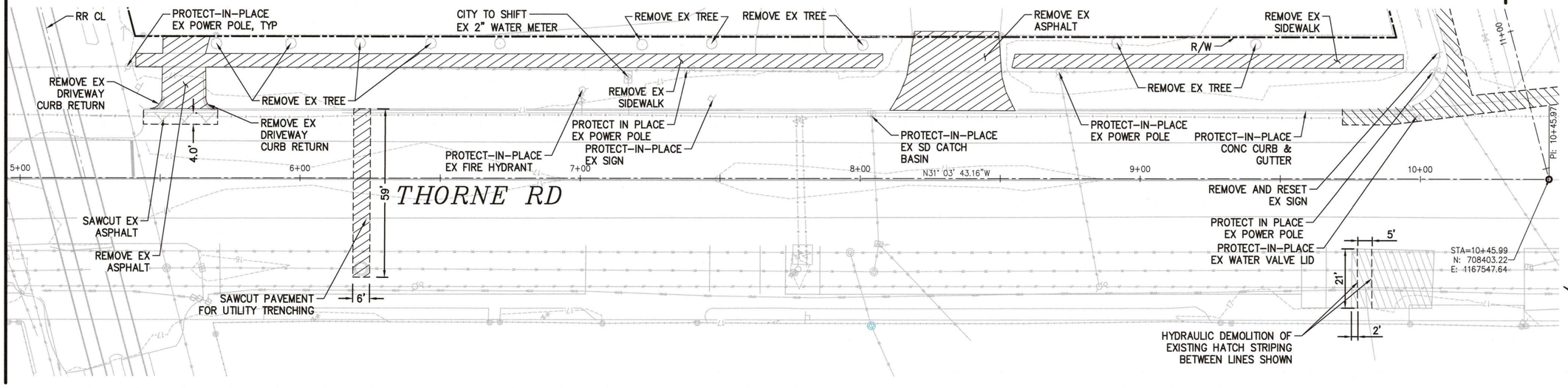
NOTES:

1. DELINEATE SAWCUT LINE AS FIRST ORDER OF WORK. CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO SAWCUT.
2. FINAL LIMITS OF RESTORATION TO BE DETERMINED BY SITE INSPECTOR IN THE FIELD.



MATCHLINE - STA 5+00 - SEE BELOW LEFT

MATCHLINE - STA 5+00 - SEE TOP RIGHT



ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

20' 0' 20' 40'
SCALE: 1"=20'

NO	REVISION	DATE	APPD	FINAL CONSTRUCTION CHECKED BY / DATE / FIELD BOOKS	DATE 6/6/2025	SCALE AS NOTED	
					DESIGNED JAT	CHECKED JMB	
					SENIOR PM JAT	PROJECT NAME	
					DRAWING NAME		

James A. Todd — State of Washington — 23341 — Registered Professional Engineer — 6/6/2025

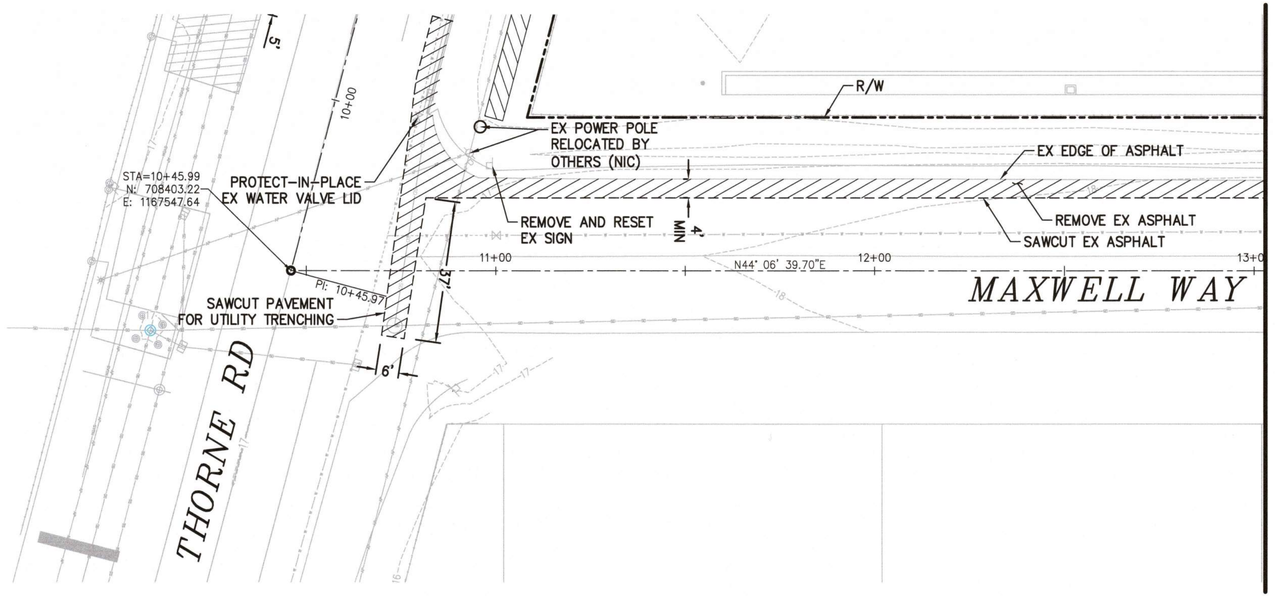
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

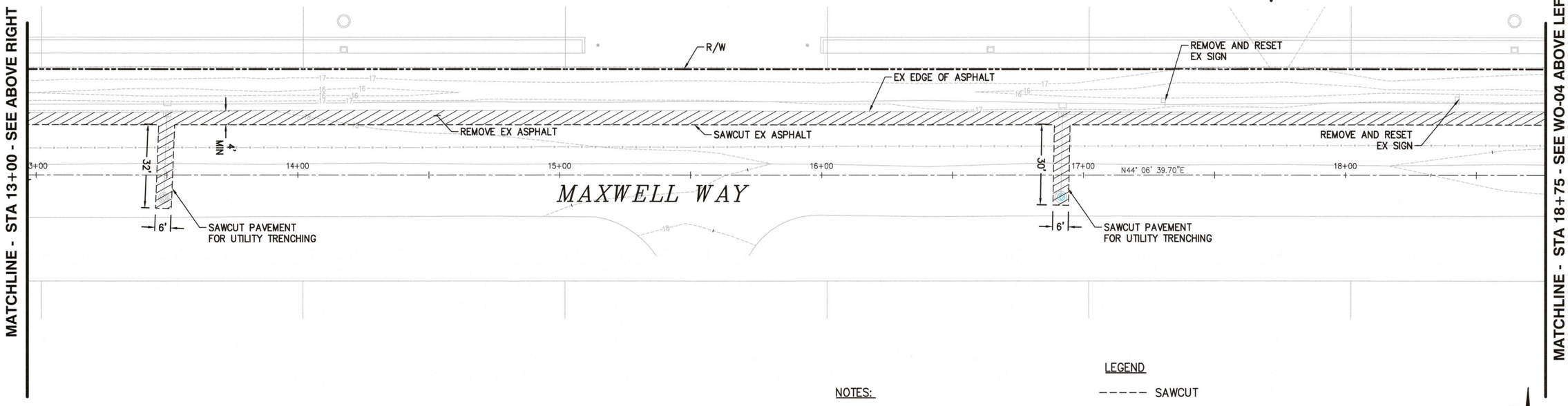
THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION PLAN - SHEET 1

WO23-0096
WO-02
SHEET NO. 2 OF 46

Q:\SEA\10284-02\CADD_ACTIVE_SHEETSET\1028402_WO-02-04.DWG

Plotted By: Todd, James 6/6/2025 1:09 PM





NOTES:

1. DELINEATE SAWCUT LINE AS FIRST ORDER OF WORK. CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO SAWCUT.
2. FINAL LIMITS OF RESTORATION TO BE DETERMINED BY SITE INSPECTOR IN THE FIELD.

LEGEND

- SAWCUT
- REMOVE EX PAVEMENT
- GRIND AND OVERLAY
- GRADING LIMITS
- R/W

PROJECT NORTH
TRUE NORTH

20' 0' 20' 40'
SCALE: 1"=20'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 6/6/2025 | SCALE: AS NOTED
DESIGNED: JAT | CHECKED: JMB
SENIOR PM: JAT | PROJECT NAME:
DRAWING NAME

STATE OF WASHINGTON 52342 REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

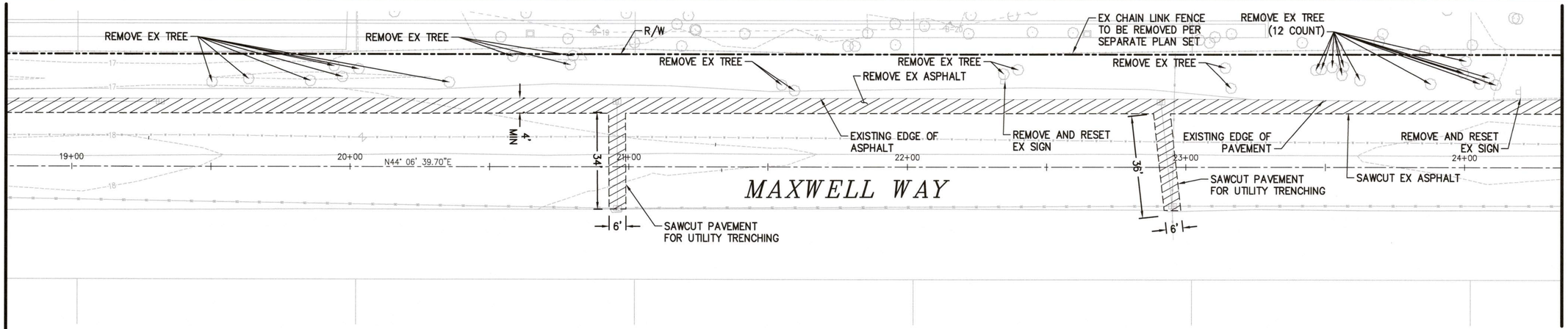
THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION PLAN - SHEET 2

WO23-0096
WO-03
SHEET NO. 3 OF 46

Q:\SEA\110284-02\CADD_ACTIVE_SHEETSET\1028402_WO-02-04.DWG

Plotted By: Todd, James 6/6/2025 1:09 PM

MATCHLINE - STA 18+75 - SEE WO-03 BELOW RIGHT



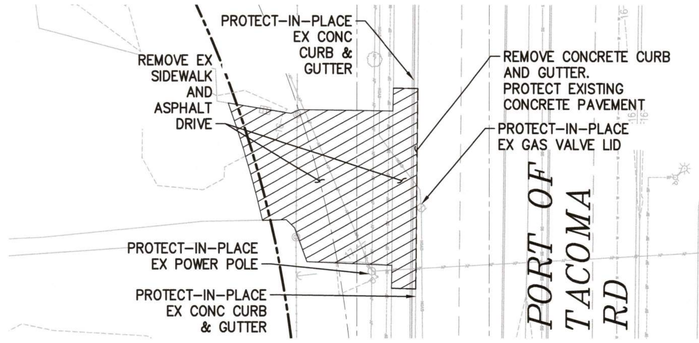
MATCHLINE - STA 24+35 - SEE BELOW LEFT

LEGEND

- SAWCUT
- REMOVE EX PAVEMENT
- GRIND AND OVERLAY
- GRADING LIMITS
- R/W

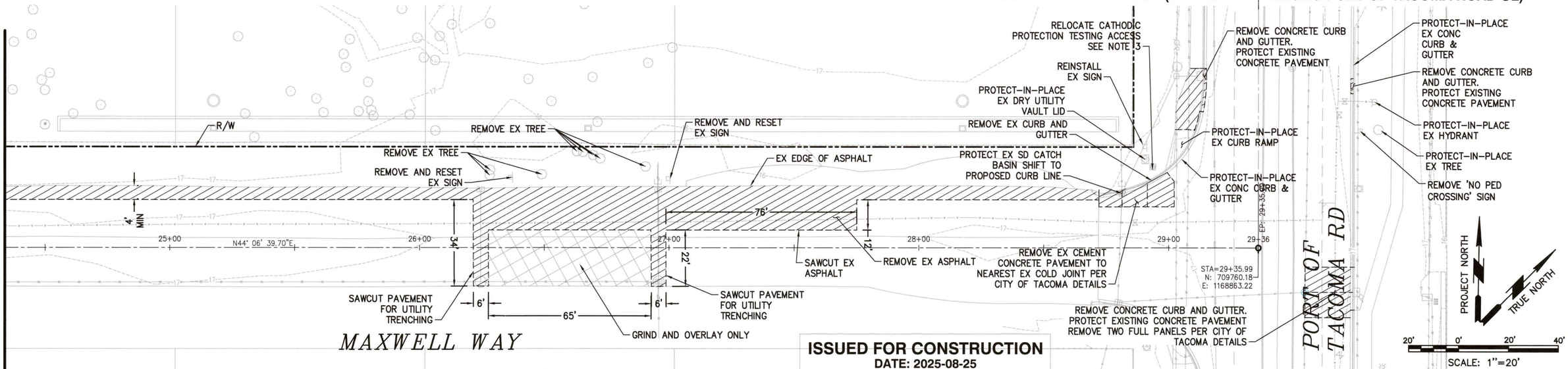
NOTES:

1. DELINEATE SAWCUT LINE AS FIRST ORDER OF WORK. CONTRACTOR SHALL RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO SAWCUT.
2. FINAL LIMITS OF RESTORATION TO BE DETERMINED BY SITE INSPECTOR IN THE FIELD.
3. CATHODIC PROTECTION MONITORING STATION SHALL BE RELOCATED AS DIRECTED BY THE CITY OF TACOMA.



BREAKLINE - SEE ABOVE (177' NORTH ⌁ ALONG PORT OF TACOMA ROAD CL)

MATCHLINE - STA 24+35 - SEE ABOVE RIGHT



ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Q:\SEA\110284-02\CADD_ACTIVE_SHEETSET\1028402_WO-02-04.DWG

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

DATE: 6/6/2025 | SCALE: AS NOTED
DESIGNED: JAT | CHECKED: JMB
SENIOR PM: JAT | PROJECT NAME:
DRAWING NAME

JAMES A. TODD — STATE OF WASHINGTON — 32342 — REGISTERED PROFESSIONAL ENGINEER — 6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
DEMOLITION PLAN - SHEET 3

WO23-0096
WO-04
SHEET NO. 4 OF 46
SHEET

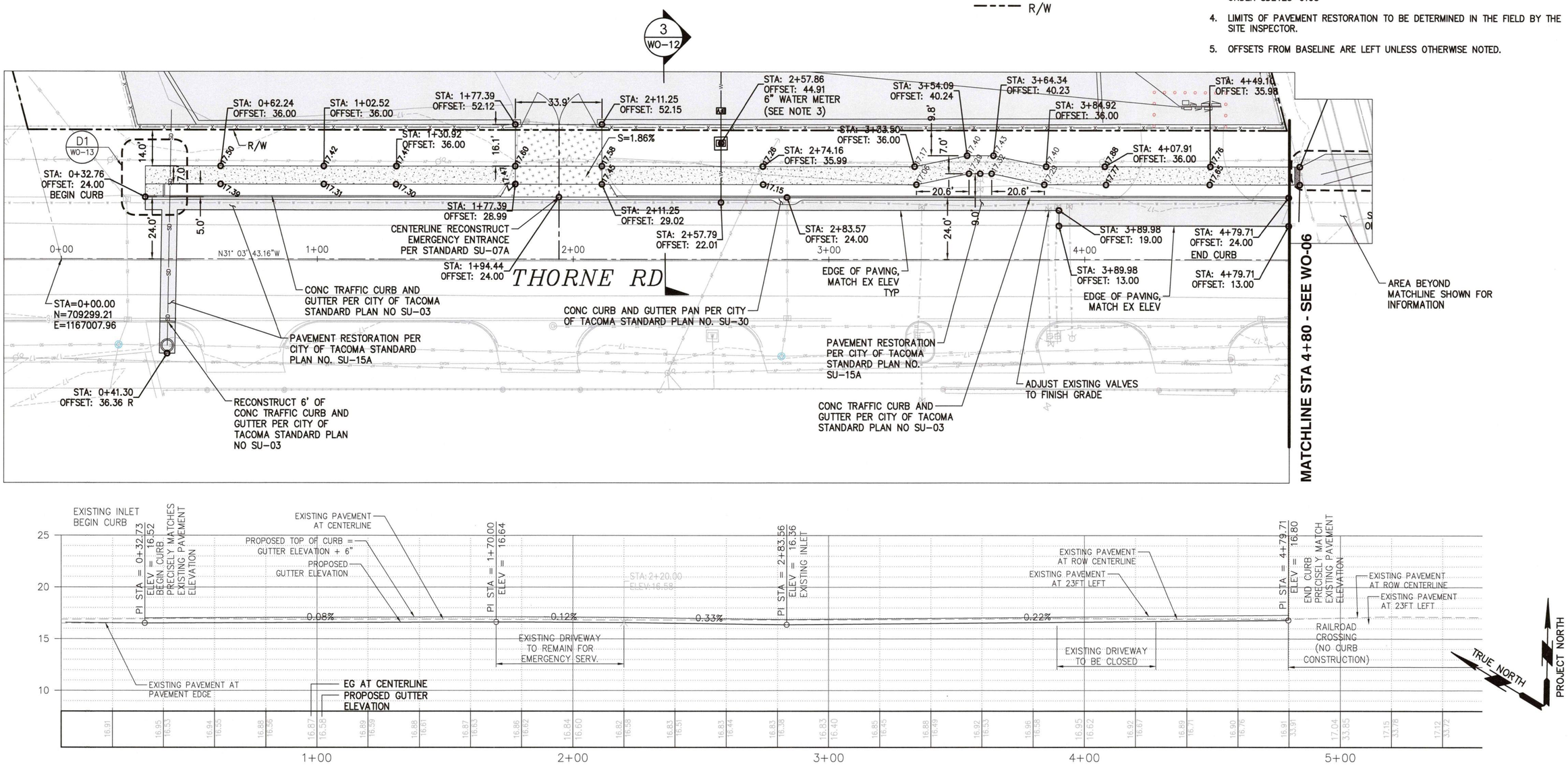
Plotted By: Todd, James 6/6/2025 1:11 PM

LEGEND

- CHAIN LINK FENCE/GATE
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES
3. WATER METER AND 6" FIRE SERVICE CONNECTION TO BE PERFORMED BY UTILITY COMPANY. SERVICE LINE FROM METER ON TO THE SITE IS COVERED UNDER SDEV23-0193
4. LIMITS OF PAVEMENT RESTORATION TO BE DETERMINED IN THE FIELD BY THE SITE INSPECTOR.
5. OFFSETS FROM BASELINE ARE LEFT UNLESS OTHERWISE NOTED.



ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

SCALE: 1"=20'

VERT. SCALE: 1"=5'

NO	REVISION	DATE	APPD	FINAL CONSTRUCTION CHECKED BY / DATE / FIELD BOOKS	DATE 6/6/2025	SCALE AS NOTED	
					DESIGNED JAT	CHECKED JMB	
					SENIOR PM JAT	PROJECT NAME	
						DRAWING NAME	

JAMES A. TODD — STATE OF WASHINGTON — 23242 — REGISTERED PROFESSIONAL ENGINEER — 6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 1

WO23-0096
WO-05
SHEET NO. 5 OF 46

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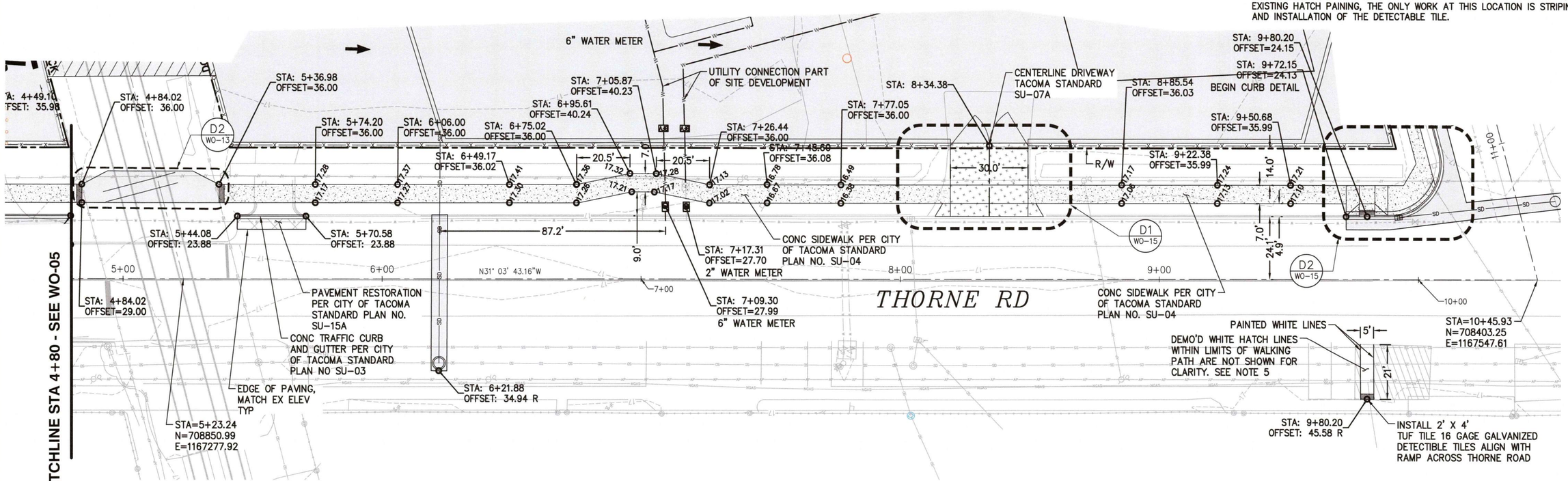
Plotted By: Todd, James 6/6/2025 1:11 PM

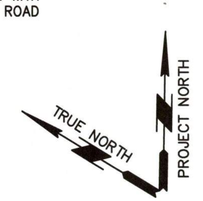
LEGEND

- CHAIN LINK FENCE/GATE
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. NEW WATER METER AND 6" FIRE SERVICE CONNECTION TO BE PERFORMED BY UTILITY COMPANY. SERVICE LINE FROM METER ON TO THE SITE IS COVERED UNDER SDEV23-0193
4. 2" WATER SERVICE CONNECTION TO RELOCATED METER TO BE PERFORMED BY UTILITY COMPANY. SERVICE LINE FROM METER ON TO THE SITE IS COVERED UNDER SDEV23-0193
5. THE TUFF TILE AND WALKING PATH ARE ALL ON EXISTING PAVEMENT. NO PAVEMENT WORK WILL BE PERFORMED, EXISTING PAVEMENT ELEVATIONS AND SLOPES TO REMAIN UNCHANGED. AFTER DEMOLITION OF PORTION OF EXISTING HATCH PAINING, THE ONLY WORK AT THIS LOCATION IS STRIPING AND INSTALLATION OF THE DETECTABLE TILE.





ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

20' 0' 20' 40'
SCALE: 1"=20'

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

JAMES A. TODD — STATE OF WASHINGTON — 52342 — REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 2

WO23-0096
WO-06
SHEET NO.
SHEET 6 OF 46

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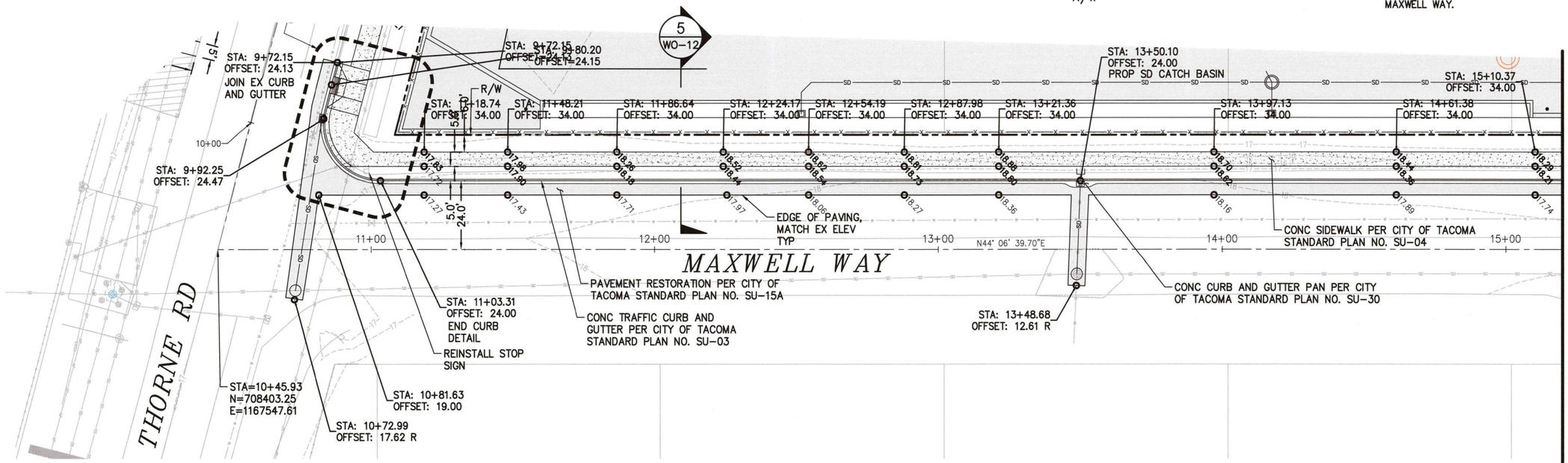
Plotted By: Todd, James 6/6/2025 1:11 PM

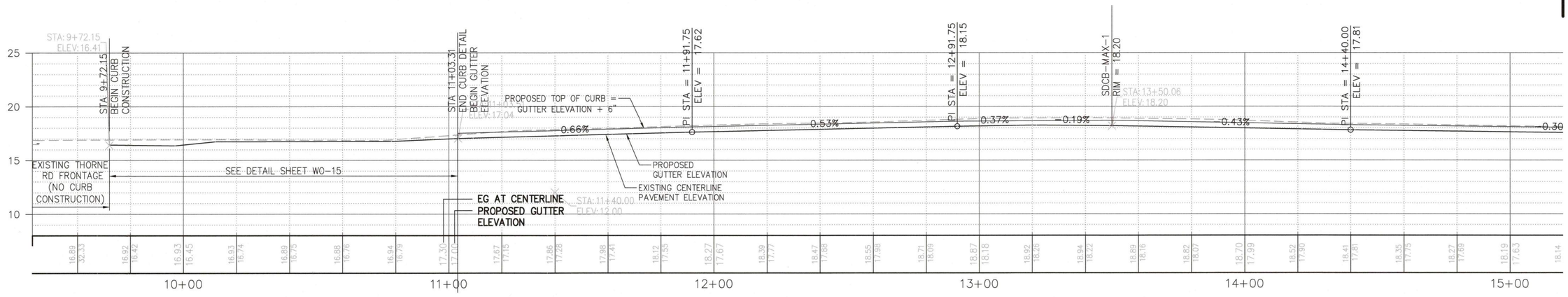
LEGEND

- CHAIN LINK FENCE/GATE
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. SEE DRAINAGE SHEETS FOR STORM DRAIN PROFILES CROSSING EXISTING WATERLINE IN MAXWELL WAY.





PROJECT NORTH
TRUE NORTH

20' 0' 20' 40'
SCALE: 1"=20'

5' 0' 5' 10'
VERT. SCALE: 1"=5'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 6/6/2025
SCALE: AS NOTED
DESIGNED: JAT
CHECKED: JMB
SENIOR PM: JAT
PROJECT NAME
DRAWING NAME

JAMES A. TODD — STATE OF WASHINGTON — 52142 — REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 3

WO23-0096
WO-07
SHEET NO. 7 OF 46

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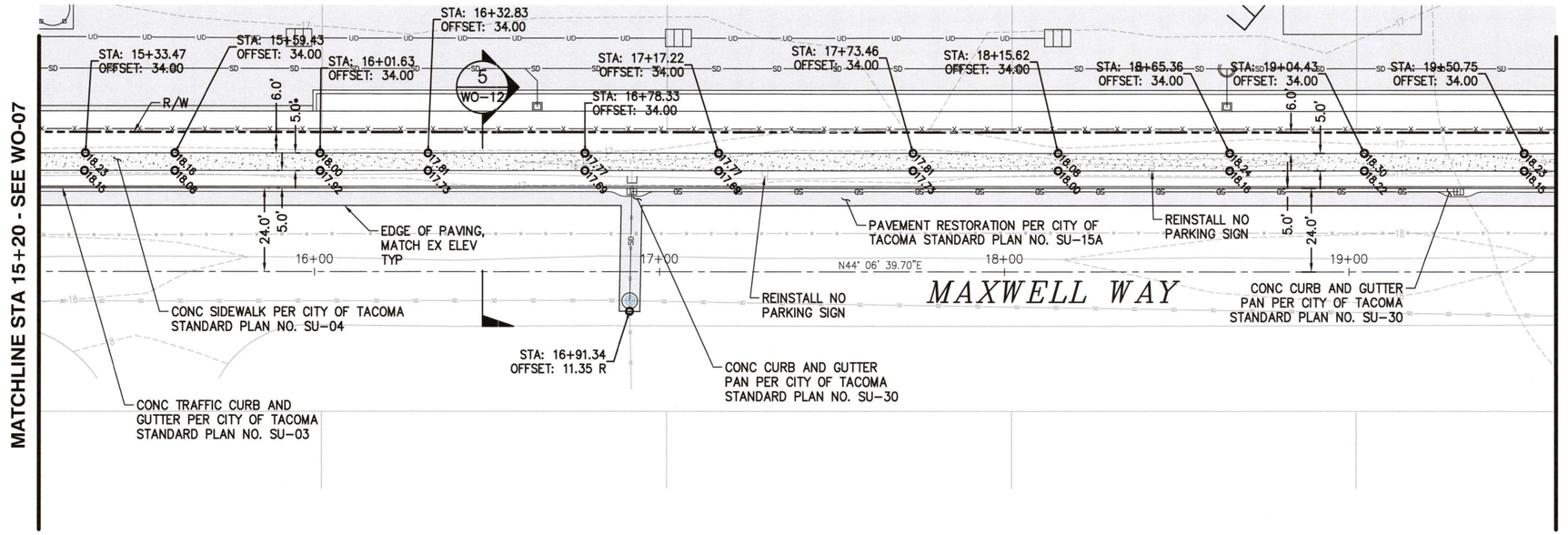
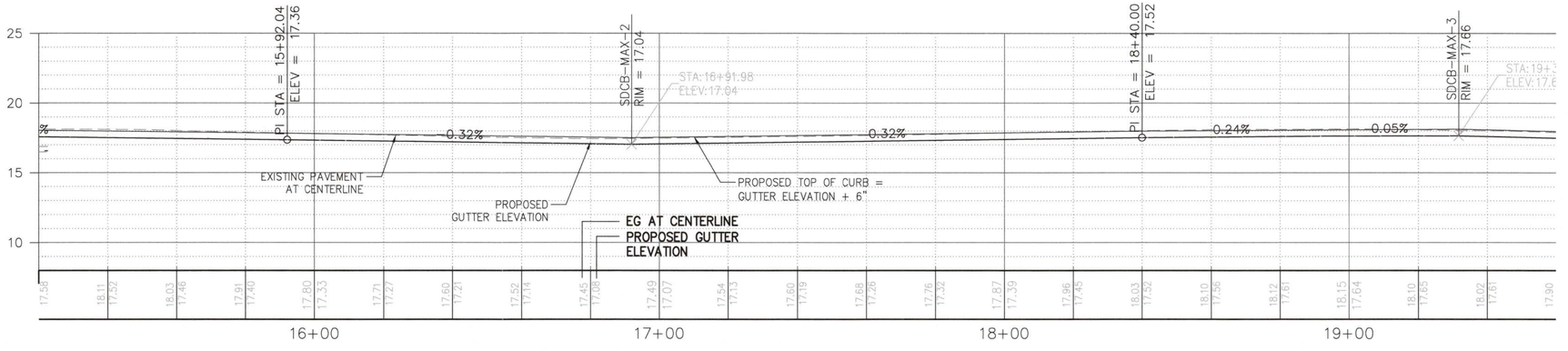
Plotted By: Todd, James 6/6/2025 1:11 PM





NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. SEE DRAINAGE SHEETS FOR STORM DRAIN PROFILES CROSSING EXISTING WATERLINE IN MAXWELL WAY.

LEGEND

- CHAIN LINK FENCE/GATE
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

PROJECT NORTH
TRUE NORTH

20' 0' 20' 40'
SCALE: 1"=20'

5' 0' 5' 10'
VERT. SCALE: 1"=5'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

JAMES A. TODD — STATE OF WASHINGTON — 52343 — REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 4

WO23-0096
WO-08
SHEET NO. 8 OF 46

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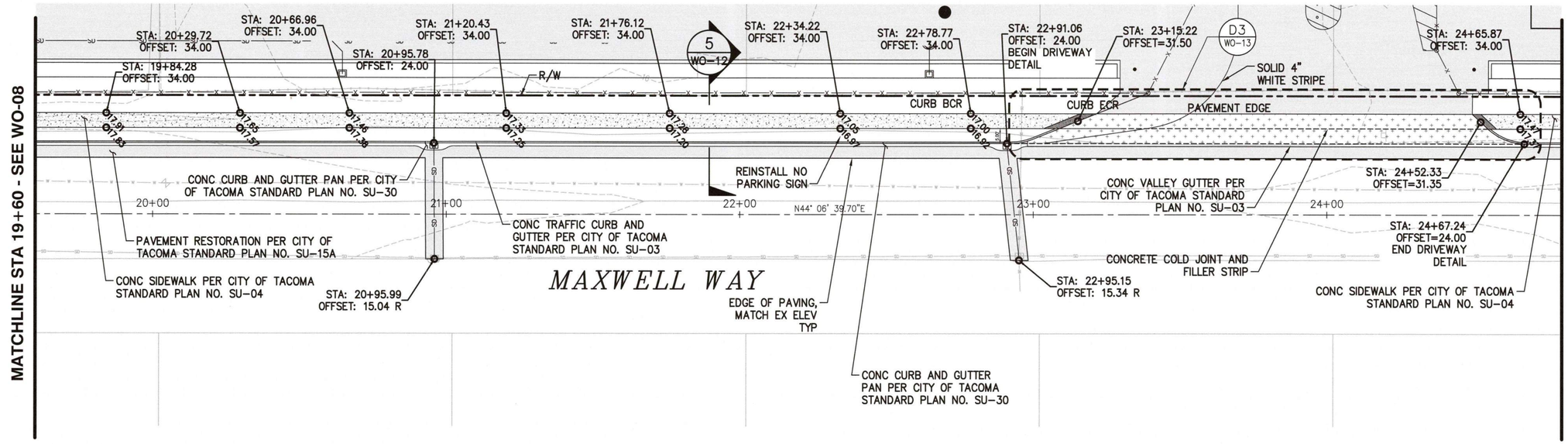
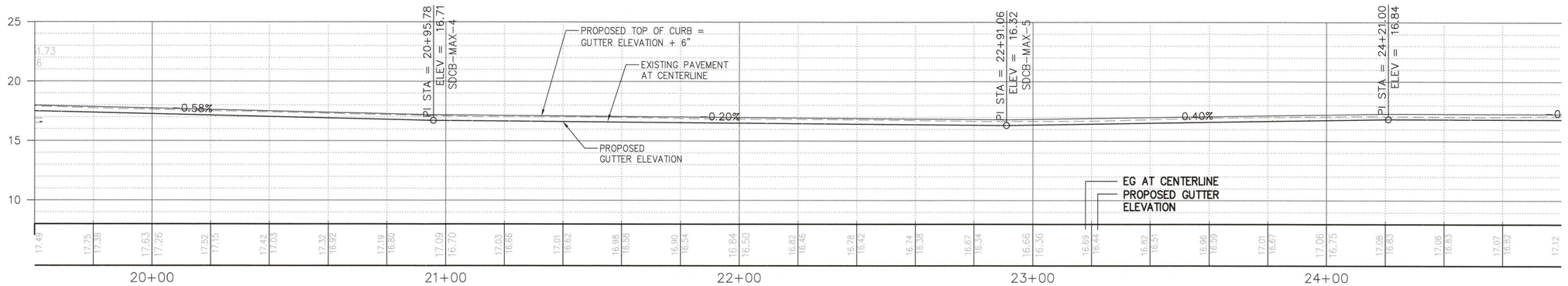
Plotted By: Todd, James 6/6/2025 1:11 PM





NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. SEE DRAINAGE SHEETS FOR STORM DRAIN PROFILES CROSSING EXISTING WATERLINE IN MAXWELL WAY.

LEGEND

- CHAIN LINK FENCE/GATE
- CEMENT CONCRETE PAVEMENT
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

PROJECT NORTH / TRUE NORTH

20' 0' 20' 40'
SCALE: 1"=20'

5' 0' 5' 10'
VERT. SCALE: 1"=5'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

JAMES A. TODD STATE OF WASHINGTON 53342 REGISTERED PROFESSIONAL ENGINEER 6/6/2025

SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 5

WO23-0096
WO-09
SHEET NO.
SHEET 9 OF 46

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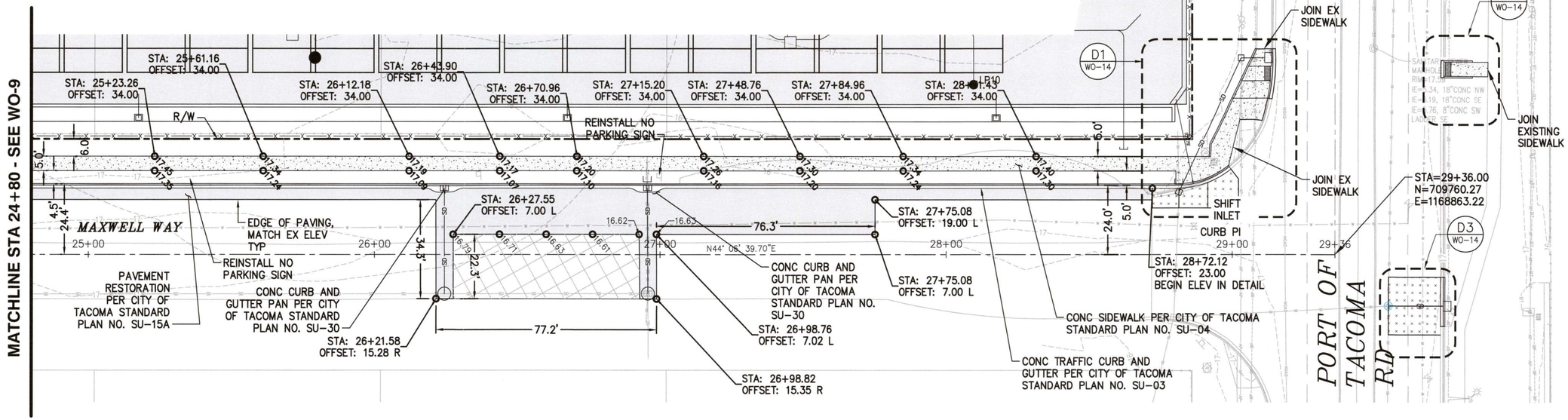
Plotted By: Todd, James 6/6/2025 1:11 PM

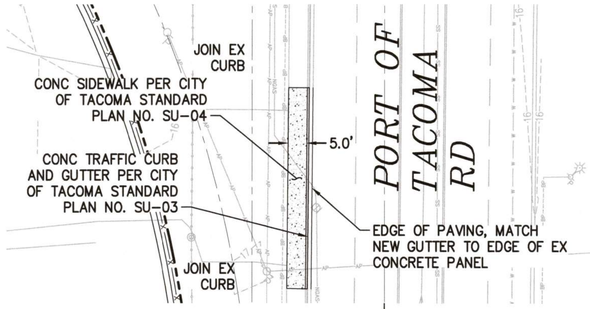
NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. SEE DRAINAGE SHEETS FOR STORM DRAIN PROFILES CROSSING EXISTING WATERLINE IN MAXWELL WAY.

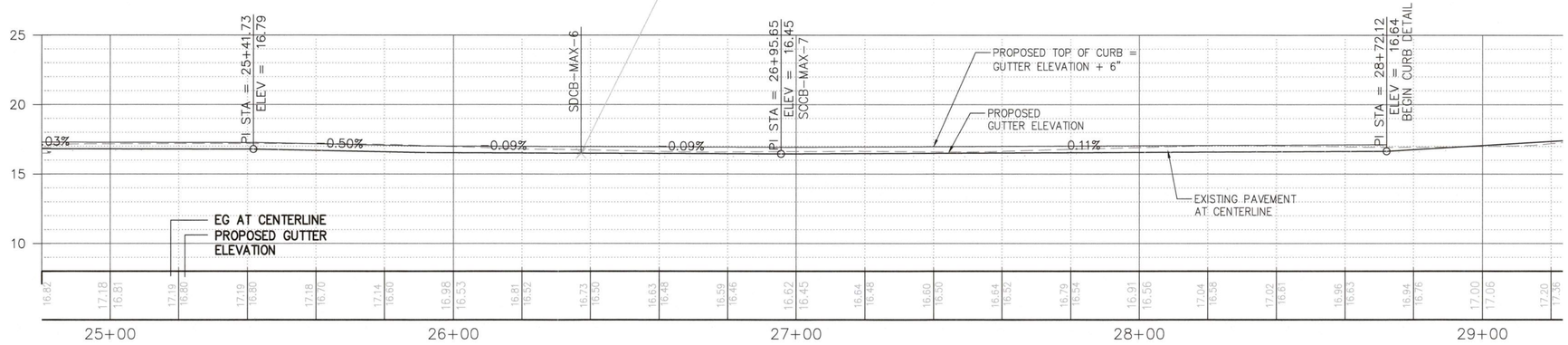
LEGEND

- CHAIN LINK FENCE/GATE
- CEMENT CONCRETE PAVEMENT
- HMA PAVEMENT
- CONCRETE SIDEWALK
- GRIND AND OVERLAY
- R/W

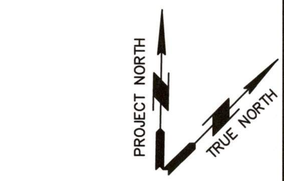




BREAKLINE - SEE ABOVE (177' NORTH ALONG PORT OF TACOMA ROAD CL)



ISSUED FOR CONSTRUCTION
DATE: 2025-08-25



NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 6/6/2025 | SCALE: AS NOTED
DESIGNED: JAT | CHECKED: JMB
SENIOR PM: JAT | PROJECT NAME
DRAWING NAME

STATE OF WASHINGTON JAMES A. TODD 52341 REGISTERED PROFESSIONAL ENGINEER
6/6/2025

SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
SITE PLAN & GUTTER PROFILE - SHEET 6

WO23-0096
WO-10
SHEET NO. 10 OF 46

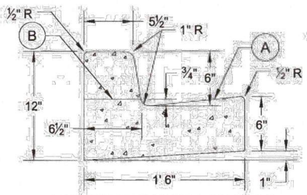
Q:\SEA\10284-02\CADD_ACTIVE_SHEETSET\10284021028402_WO-05-10.DWG

Plotted By: Todd, James 6/6/2025 1:12 PM

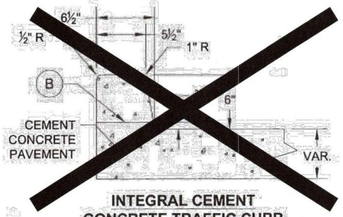
NOTES:

(A) When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The height of the curb shall be 6", unless otherwise shown on plans.

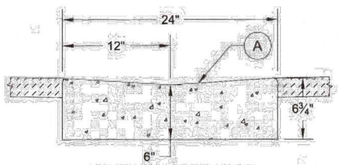
(B) Flush with gutter pan at curb ramp entrance or ¾" vertical lip at driveway entrance.



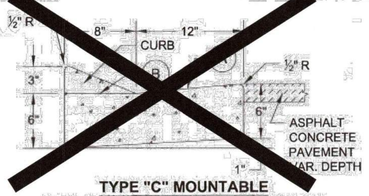
CEMENT CONCRETE TRAFFIC CURB & GUTTER



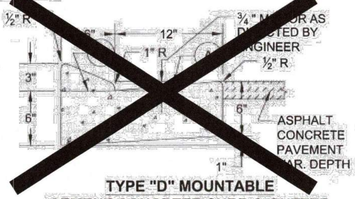
INTEGRAL CEMENT CONCRETE TRAFFIC CURB



CEMENT CONCRETE VALLEY GUTTER



TYPE "C" MOUNTABLE CEMENT CONCRETE CURB & GUTTER



TYPE "D" MOUNTABLE CEMENT CONCRETE CURB & GUTTER

NOTES:

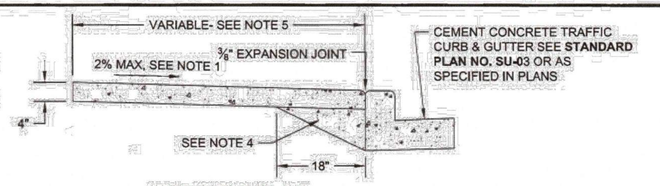
1. For trench crossings, curb and gutter shall be removed to a minimum 2' cut back over undisturbed soil.
2. In all projects, any remaining sections of curb and gutter less than 5' in length between the project area and the nearest control joint shall also be removed and replaced.
3. All joints shall be saw cut full depth prior to restoration and ⅜" expansion joint installed.
4. Concrete finish shall match existing.
5. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Foundations shall be fully compacted prior to form placement.
7. Unsuitable foundation shall be replaced with ⅝" crushed surfacing top course.

REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS — PUBLIC WORKS	GMS — ENVIRONMENTAL SERVICES		CEMENT CONCRETE CURB AND GUTTER
NA — TACOMA POWER	NA — TACOMA WATER	8/16/16 — CITY ENGINEER — DATE	STANDARD PLAN NO. SU-03

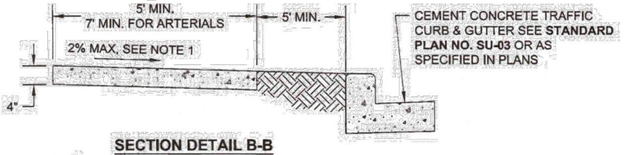
1 — **CEMENT CONCRETE CURB AND GUTTER, SU-03**
SCALE: NTS

NOTES:

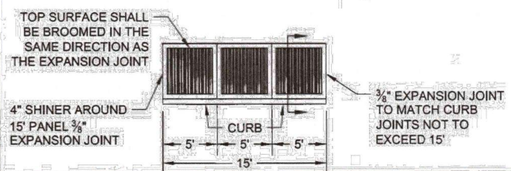
1. Sidewalks shall be designed and constructed in accordance with 2010 ADA Standards, 28 CFR, Part 35 and as supplemented by the Public Right of Way Accessibility Guidelines (PROWAG). City of Tacoma prefers sidewalk cross slopes to be designed to a maximum of 1.5% and a minimum of 1.0%
2. When placing walk adjacent to existing curb and gutter, curb and gutter will be repaired as necessary before placing concrete forms for walk.
3. Staking is required where no curb is present.
4. Thickened edge shall be constructed using cement concrete on all radii. All other locations shall be backfilled and compacted.
5. Combination walk shall be 7' min. on all commercial sites and arterial streets. Combination walk shall be a minimum of 5' on non arterial streets. Dimensions are from back of curb to back of walk. See contract plans for width and placement of sidewalk.
6. All expansion joints shall be full depth with ⅜" premolded joint filler.
7. All joints shall be cleaned and edged. External edges shall be ½" radius. Internal joints shall be ¼" radius.
8. All soft and yielding foundation material shall be removed and replaced with crushed surfacing top course (CSTC) per Section 9-03.9(3) of the WSDOT Standard Specifications.
9. All sidewalk shall be replaced to the nearest expansion or contraction joint. All joints shall be saw cut full depth prior to restoration and ⅜" expansion joint installed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
10. For sidewalks within the North Slope Historical District area use Standard Plan HD-NS03. See Standard Plan HD-NS01 for North Slope Historic District site map.

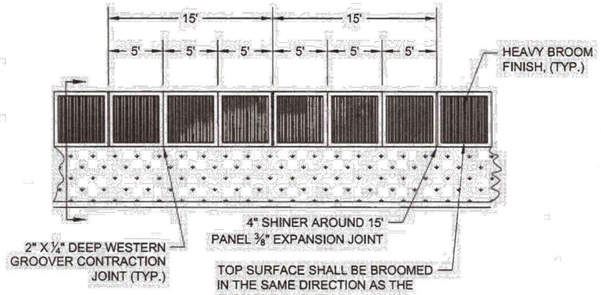


SECTION DETAIL A-A



SECTION DETAIL B-B





REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS — PUBLIC WORKS	GMS — ENVIRONMENTAL SERVICES		CEMENT CONCRETE SIDEWALK
N/A — TACOMA POWER	N/A — TACOMA WATER	4/25/19 — CITY ENGINEER — DATE	STANDARD PLAN NO. SU-04

2 — **CEMENT CONCRETE SIDEWALK, SU-04**
SCALE: NTS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED — BY — DATE — FIELD BOOKS
DATE 6/6/2025 — SCALE AS NOTED
DESIGNED JAT — CHECKED JMB
SENIOR PM JAT — PROJECT NAME
DRAWING NAME

6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS 1 OF 5

WO23-0096
WO-11
SHEET NO. 11 OF 46

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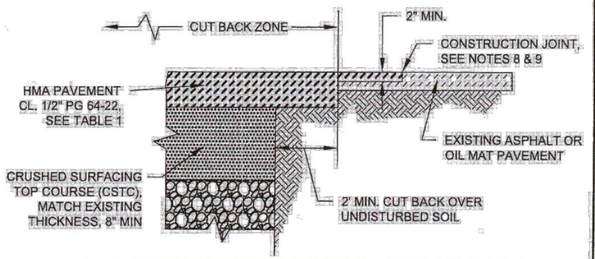
Plotted By: Todd, James 6/6/2025 1:14 PM

NOTES

1. **All pavement restoration work shall also meet the requirements of the City of Tacoma's Right of Way Restoration Policy. See Standard Plan SU-15B for any streets exempt from this policy.**
2. Temporary Surface Restoration:
   Arterials, industrial areas and/or roads with bus traffic: Temporary patches shall be compacted and leveled to a minimum of 3-inches of hot-mix asphalt (HMA).
   Residentials and alleys: Temporary patches shall be compacted and leveled to a minimum of 2-inches of either HMA or cold-mix asphalt. Temporary patches between October 1st and March 31st shall be made with HMA unless otherwise approved.
3. All permanent final patches shall be rectangular in shape and constructed parallel and perpendicular to the road centerline.
4. Where existing pavement defects are in close proximity to the new cut, the inspector may require additional pavement removal to eliminate the pavement defect.
5. The final cut edge of paved surfaces shall be smooth and straight, consistent with grinding or saw cutting devices. No jagged, broken or undermined edges are allowed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Final compaction of HMA shall be 91% of maximum density.
   Isolated patches: Minimum 1 test per patch up to 150 square feet, and 1 test required every additional 300 square feet, thereafter.
   Trench patches: 1 test every 150 linear feet of trench with a minimum of 2 tests per trench.
   Testing shall be performed by a certified independent testing laboratory or certified tester, as approved by the City's Construction Division. Tests shall be completed and reports identifying the project number submitted to the City Construction Division within 48 hours of test.
7. All joints between the new and original asphalt pavement shall be sealed with hot asphalt or asphalt emulsion and covered with dry paving sand before the asphalt solidifies. Existing surfaces shall be prepared in accordance with WSDOT Standard Specification 5-04.3(5)A prior to placing any new pavement surfaces.
8. Longitudinal construction joints shall only be located at the center or edge of affected lanes.
   Streets and courts 20 feet or less in width and all alleys are considered one-lane streets. Non-arterial streets and courts greater than 20 feet in width with no traffic channelization are considered two-lane streets with one-lane either side of the centerline of the street.
   Non-arterial streets greater than 32 feet in width with no traffic channelization may be considered three lane streets upon prior approval from the City Engineer.
9. Transverse construction joints terminate at the edge of the 2' cut back.
10. HMA pavement shall not be placed over CDF until approved by the City.

TABLE 1
PAVEMENT REPLACEMENT DEPTH IN CUT BACK ZONE

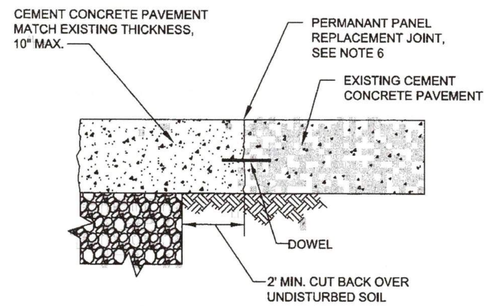
	MIN.	MAX.
ARTERIALS, INDUSTRIAL AREAS & ROADS WITH BUS TRAFFIC	MATCH EXISTING +1", OR 4", WHICHEVER IS GREATER	6"
RESIDENTIALS AND ALLEYS	MATCH EXISTING +1", OR 3", WHICHEVER IS GREATER	4"



CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	TYPICAL PAVEMENT RESTORATION FOR ASPHALT CONCRETE/OIL MAT PAVEMENT
	CITY ENGINEER 12 Jun 2009 DATE	STANDARD PLAN NO. SU-15A

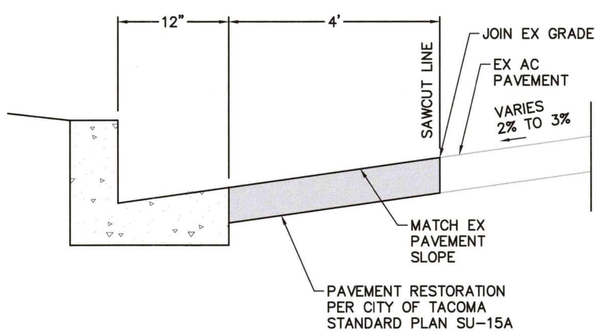
NOTES:

1. **All pavement restoration work shall also meet the requirements of the City of Tacoma's Right of Way Restoration Policy.**
2. Temporary Surface Restoration:
   Arterials, industrial areas and/or roads with bus traffic: Temporary patches shall be compacted and leveled to a minimum of 3-inches of hot-mix asphalt (HMA).
   Residentials and alleys: Temporary patches shall be compacted and leveled to a minimum of 2-inches of either HMA or cold-mix asphalt. Temporary patches between October 1st and March 31st shall be made with HMA unless otherwise approved.
3. All permanent final patches shall be rectangular in shape and constructed parallel and perpendicular to the road centerline.
4. Where existing pavement defects are in close proximity to the new cut, the inspector may require additional pavement removal to eliminate the pavement defect.
5. The final cut edge of paved surfaces shall be smooth and straight, consistent with grinding or saw cutting devices. No jagged, broken or undermined edges are allowed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Permanent Panel Replacement:
   Arterials, industrial areas and/or roads with bus traffic:
   100% panel replacement is required for all affected panels. Monolithic curbs will be poured at time of panel replacement.
   Residential and Alleys: Panels cut greater than ⅓ the panel length, width, or total area, including the 2-foot cut back, will require 100% panel replacement. Panels cut less than ⅓ the panel length, width, or total area, including the 2-foot cut back will require 50% panel replacement. Three-piece panels are not acceptable and will require 100% panel replacement.
7. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete pavement. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.
8. Dowel in accordance with WSDOT Standard Plan A-60.10-00 for arterials, industrial areas, and/or roads with bus traffic. In residential streets the dowel bars may be reduced to 1-inch in diameter. In lieu of dowels, full panel replacement is acceptable.

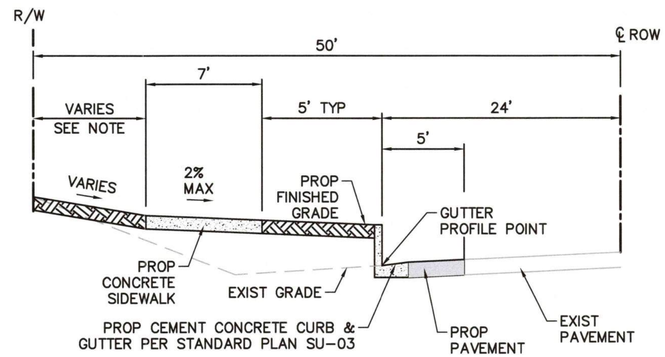


CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	TYPICAL PAVEMENT RESTORATION FOR CEMENT CONCRETE PAVEMENT
	CITY ENGINEER 11/20/19 DATE	STANDARD PLAN NO. SU-14C

1 – DETAIL - HMA PAVEMENT, SU-15A
SCALE: NTS

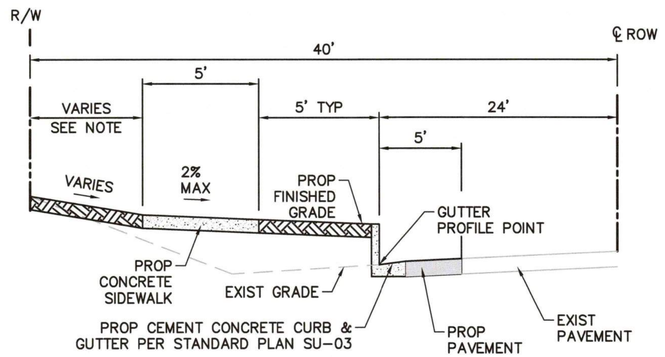


2 – CURB & GUTTER TIE IN
SCALE: NTS



3 – STREET TYPICAL SECTION - THORNE ROAD
SCALE: NTS

4 – PORT OF TACOMA ROAD PAVEMENT RESTORATION, SU-14C
SCALE: NTS



5 – STREET TYPICAL SECTION - MAXWELL WAY
SCALE: NTS

NOTES:

1. STRIPING SHALL BE 4" WHITE UNLESS NOTED.
2. STABILIZE GRADED SURFACES WITH EROSION CONTROL BLANKETS PRIOR TO ESTABLISHING FINAL COVER TYPE. HYDROSEED ALL FINISHED PERVIOUS SURFACES.
3. SLOPE AND WIDTH BEHIND THE SIDEWALK VARIES TO PRESERVE EXISTING FEATURES. OTHERWISE, THE SPACE IS 14 FT WIDE ALONG THORNE ROAD AND 6 FT WIDE ALONG MAXWELL WAY.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

JAMES A. TODD, STATE OF WASHINGTON, 52342, REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS 2 OF 5

WO23-0096
WO-12
SHEET NO. 12 OF 46

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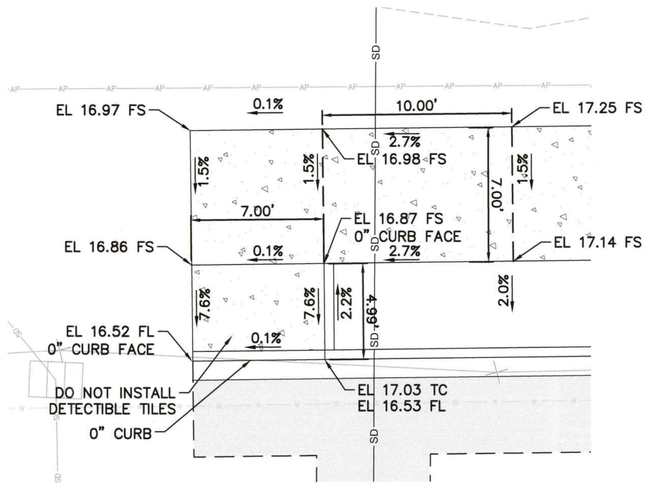
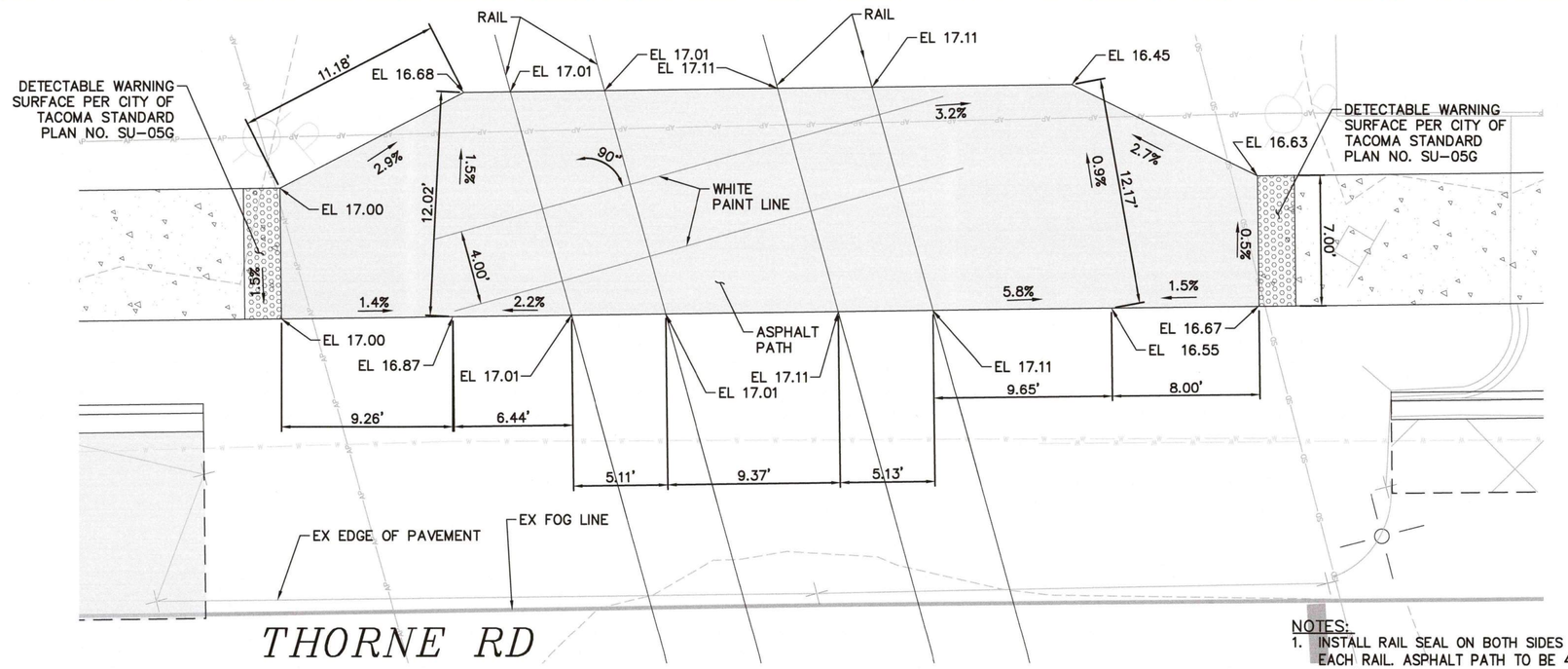
Plotted By: Todd, James 6/13/2025 9:08 AM

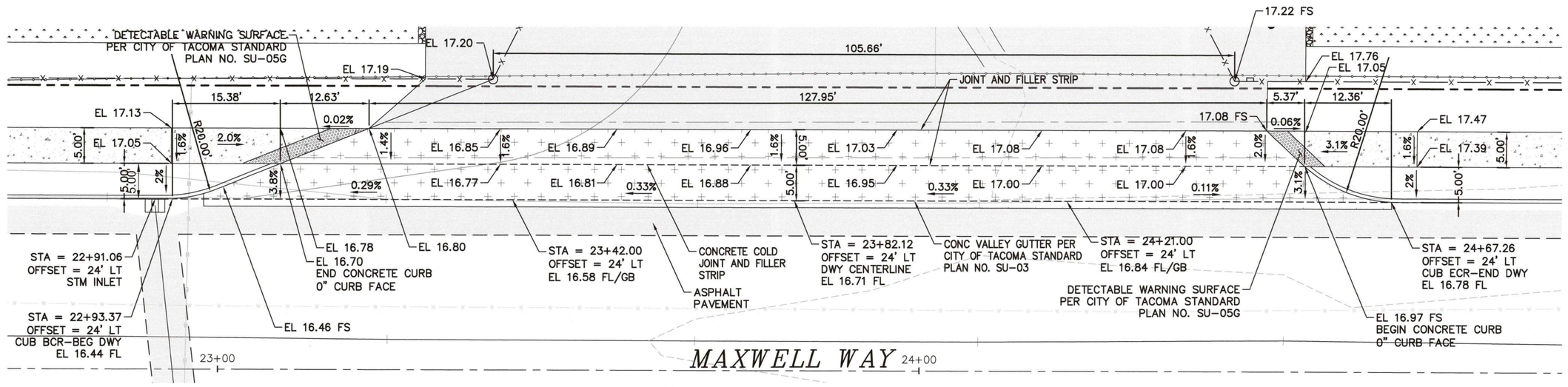


1 — **TEMPORARY SIDEWALK STREET CONNECTION**
SCALE: 1" = 4'



2 — **SIDEWALK RAMP DETAIL**
SCALE: 1" = 4'

NOTES:
1. INSTALL RAIL SEAL ON BOTH SIDES OF EACH RAIL. ASPHALT PATH TO BE 4" ACP ON 6" ABC.
2. RAIL SEAL PER UPRR DETAILS..



3 — **DRIVEWAY DETAIL**
SCALE: 1" = 8'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 6/6/2025	SCALE AS NOTED	
BY	DESIGNED JAT	CHECKED JMB	
DATE	SENIOR PM JAT	PROJECT NAME	
FIELD BOOKS	DRAWING NAME		

JAMES A. TODD — STATE OF WASHINGTON — 25541 — REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS 3 OF 5

WO23-0096
WO-13
SHEET NO. 13 OF 46

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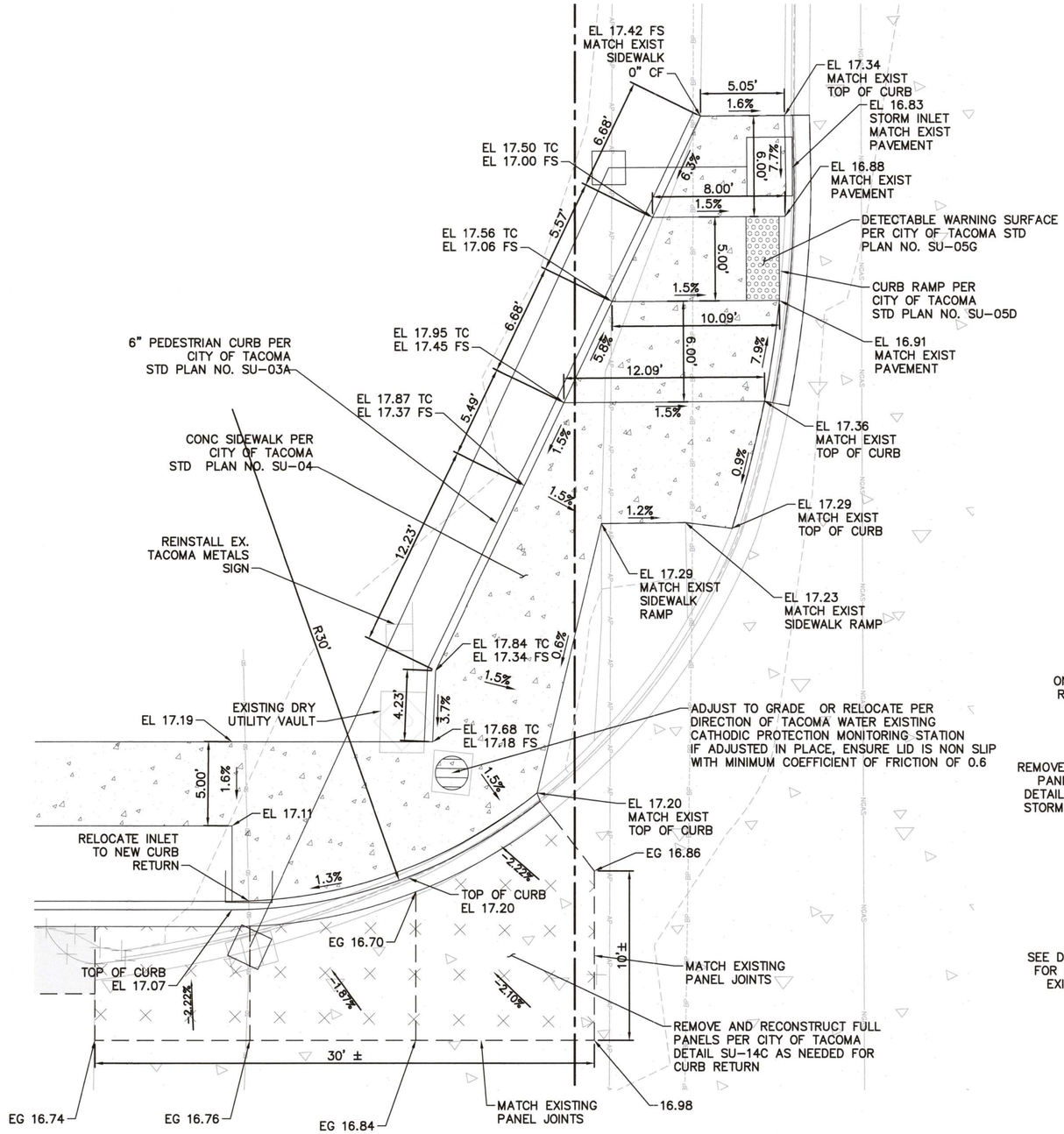
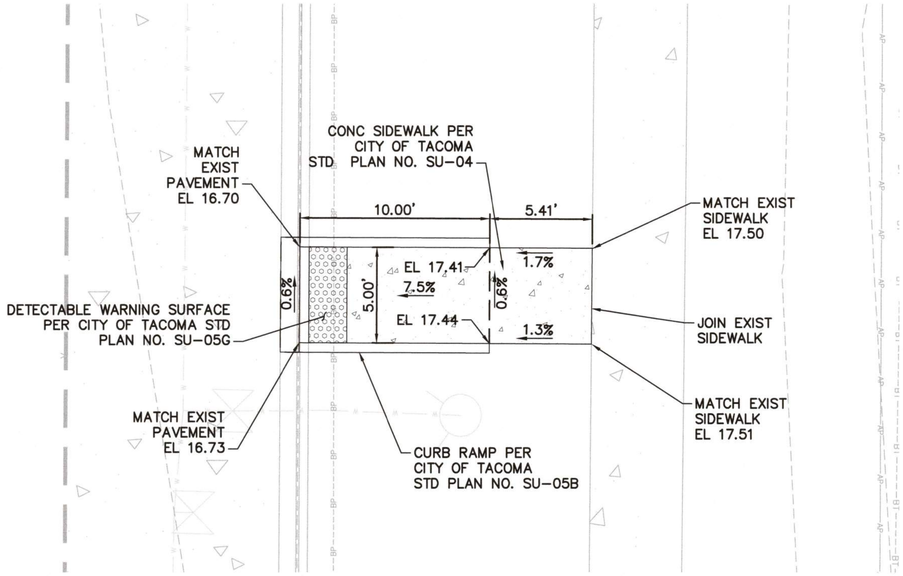


1 — **SIDEWALK RAMP DETAIL**
SCALE: 1" = 4'



2 — **SIDEWALK RAMP DETAIL**
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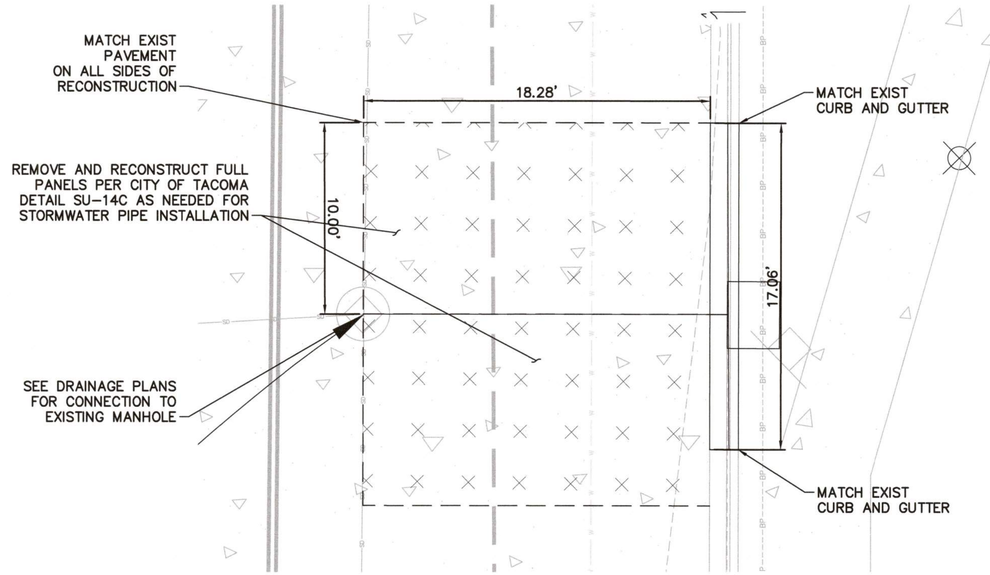

3 — **CONCRETE ROAD DETAIL**
SCALE: 1" = 4'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 6/6/2025	SCALE AS NOTED	
BY	DESIGNED JAT	CHECKED JMB	
DATE	SENIOR PM JAT	PROJECT NAME	
FIELD BOOKS	DRAWING NAME		

STATE OF WASHINGTON 52342 REGISTERED PROFESSIONAL ENGINEER
6/6/2025
SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS 4 OF 5

WO23-0096
WO-14
SHEET NO. 14 OF 46

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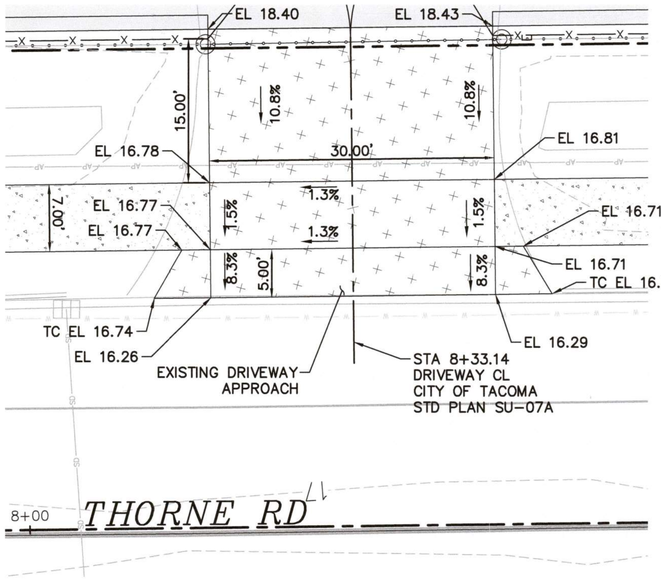
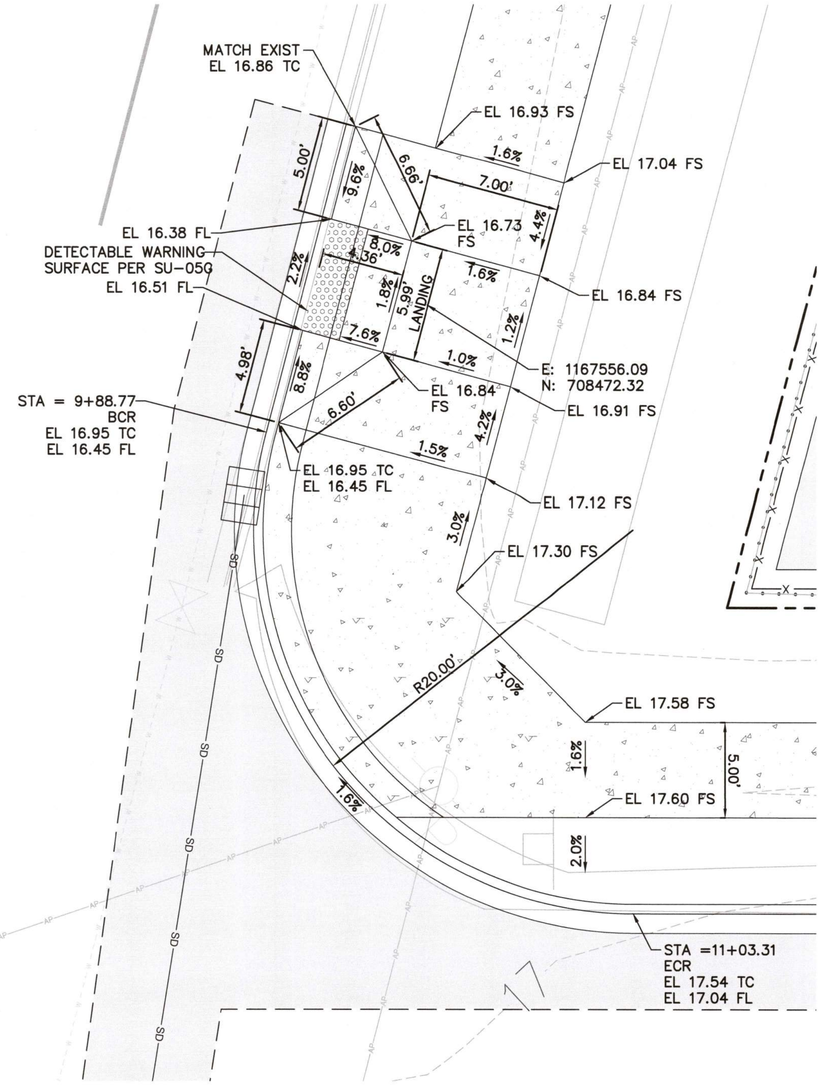
Plotted By: Todd, James 6/13/2025 9:09 AM



1 — **DRIVEWAY DETAIL**
SCALE: 1" = 8'



2 — **SIDEWALK RAMP DETAIL**
SCALE: 1" = 4'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Tacoma	NO	REVISION	DATE	APPD	FINAL CONSTRUCTION CHECKED BY / DATE / FIELD BOOKS	DATE 6/6/2025 · SCALE AS NOTED · DESIGNED JAT · CHECKED JMB · SENIOR PM JAT · PROJECT NAME · DRAWING NAME	JAMES A. TODD STATE OF WASHINGTON 22340 REGISTERED PROFESSIONAL ENGINEER 6/6/2025 — SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
DETAILS 5 OF 5

WO23-0096
WO-15
SHEET NO. 15 OF 46

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Plotted By: Todd, James 6/6/2025 1:16 PM

NOTES:

1. SEE SHEET WO-17 FOR ADDITIONAL SURVEY AND BENCHMARK DATA.

STA=0+00.00
N=709299.21
E=1167007.96
FOUND MONUMENT
IN CASE
2"BRASS DISK
W/"X"
DOWN 0.6'±
12/27/19

S31° 03' 43"E
1045.97

STA=5+23.24
N=708850.99
E=1167277.92

N44° 06' 05"E
756.16

S45° 54' 00"E
1011.16

STA=29+35.88
505.58 LT
N=710112.02
E=1168500.15
P.O.T. "L"
FOUND MONUMENT
2" SURFACE BRASS DISK
W/ PUNCH 12/08/19

THORNE ROAD

S31° 03' 43"E
522.69

STA=10+45.93
N=708403.25
E=1167547.61
P.O.T. "F"
FOUND MONUMENT
IN CASE
2"BRASS DISK
W/PUNCH
DOWN 0.4'±
12/08/19

N44° 06' 40"E
1890.06

PORT OF TACOMA ROAD

STA=29+35.99
N=709760.18
E=1168863.22
P.O.T. "104"
FOUND MONUMENT
2" SURFACE BRASS DISK
W/ PUNCH 12/08/19

SURVEY BASELINE OF
THORNE ROAD

SURVEY BASELINE OF
MAXWELL WAY

MAXWELL
ENTRANCE & EXIT

SURVEY BASELINE OF
PORT OF TACOMA RD

TRUE NORTH

PROJECT NORTH

1
WO-12
SURVEY CENTERLINE
SCALE: 1" = 80'

80' 0' 80' 160'
SCALE: 1"=80'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 6/6/2025
DESIGNED JAT
SENIOR PM JAT
DRAWING NAME

SCALE AS NOTED
CHECKED JMB
PROJECT NAME

STATE OF WASHINGTON · JAMES A. TODD · 53342 · REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ALIGNMENT AND BENCHMARK DATA

WO23-0096
WO-16
SHEET NO. 16 OF 46

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BINDING EDGE

Plotted By: Todd, James 6/6/2025 1:16 PM

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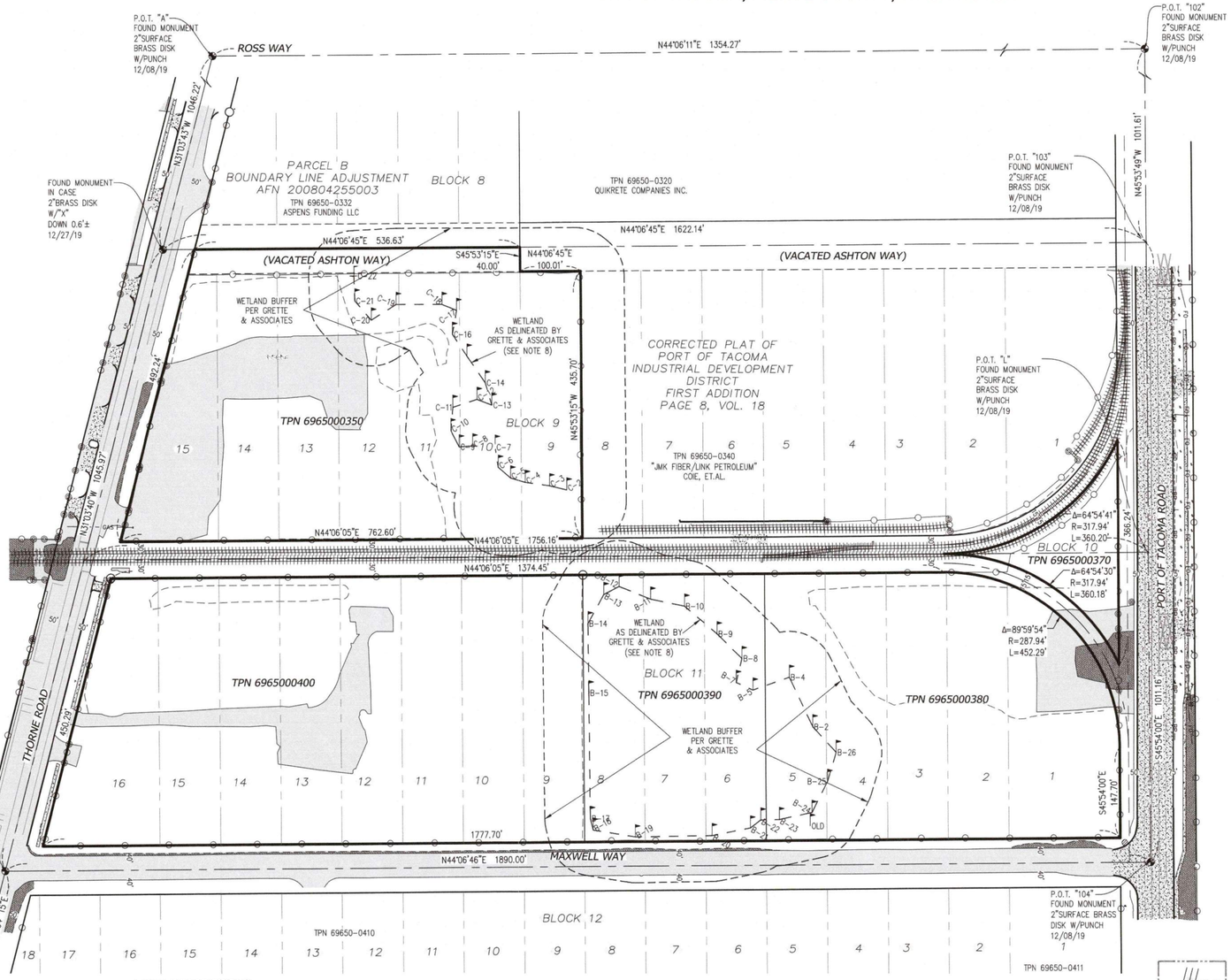
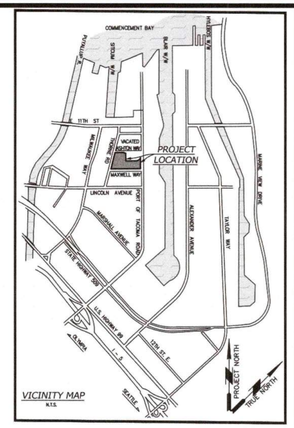
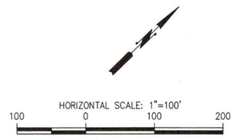
PORT OF TACOMA FILE: O:\186001\186541\Drawings\186541 - V01.01

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

BOUNDARY AND TOPOGRAPHIC SURVEY
PORT OF TACOMA THORNE ROAD OFF-DOCK FACILITY
A PORTION OF THE S.E. 1/4 OF SECTION 34, TOWNSHIP 21 NORTH, RANGE 3 EAST, W.M., CITY OF TACOMA, PIERCE COUNTY, WASHINGTON







HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2011
(PER PORT OF TACOMA SURVEY CONTROL MAP – 2016)

MEASURED NORTH 44°06'40" EAST BETWEEN MONUMENTS #104 AND "L" LOCATED ON MAXWELL WAY AT THE INTERSECTIONS OF PORT OF TACOMA ROAD AND THORNE ROAD

VERTICAL DATUM

MLLW (PER PORT OF TACOMA 2016 SURVEY CONTROL MAP)

TIDE 22 1933 BENCHMARK: LOCATED AT NE CORNER OF 11TH ST. BRIDGE AT THE INTERSECTION OF E. 11TH ST. AND MILWAUKEE WAY
ELEVATION = 19.18
(BASED ON 1983–2001 TIDAL EPOCH)

SITE TEMPORARY BENCHMARK:
P.O.T. MONUMENT #104 AT INTERSECTION OF PORT OF TACOMA ROAD AND MAXWELL WAY
ELEV=17.59

SITE DATA

TAX PARCEL NOS. 6965000410, 6965000411, 6965000423
AREA: 18.6± ACRES

NOTES

1. EQUIPMENT USED: TOPCON QS ROBOTIC TOTAL STATION
2. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH THE FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332-130-090. ALL MEASUREMENTS WERE MADE WITH A TOPCON QS ROBOTIC TOTAL STATION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON (R.C.W.) 58.09 AND THE WASHINGTON ADMINISTRATIVE CODE (W.A.C.) 332-130, THIS SURVEY MAY DEPICT OCCUPATIONAL INDICATORS THAT DIFFER FROM THE DEEDED LOT LINES. THESE INDICATORS, IF AT ALL PRESENT, MAY REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT PURPORT TO RESOLVE SUCH ITEMS.
4. FIELD WORK PERFORMED IN NOVEMBER AND DECEMBER 2019, UNDER SITTS & HILL PROJECT NUMBER 18654.
5. UTILITIES AS SHOWN HEREON ARE BASED ON FIELD SURVEY OBSERVATION OF UTILITY LOCATE SERVICES PERFORMED BY MOUNTAIN VIEW LOCATING SERVICES LLC. IN NOVEMBER 2019 FOR THIS SURVEY. THIS HAS BEEN SUPPLEMENTED BY PUBLIC RECORDS. RECORD UTILITY LINES SHOWN HEREON ARE DEPICTED WITH THE STANDARD LINETYPE WITH A "– R" AS SHOWN IN THE LEGEND. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY AND PAINTED UTILITY LOCATE LINES. COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA IS CONSISTENT WITH QUALITY LEVEL (B) OF THE ASCE STANDARD GUIDELINES 38-02.
6. SITTS & HILL ENGINEERS, INC. HAS RELIED UPON TITLE INFORMATION NOTED IN COMMITMENT FOR TITLE INSURANCE PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, GUARANTEE NUMBER 3377765, DATED 01/02/2020. IN PREPARATION OF THIS SURVEY, SITTS AND HILL ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS SITTS AND HILL ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND/OR DISCLOSED BY SAID TITLE COMPANY'S ORDER. SITTS & HILL ENGINEERS, INC. HAS RELIED WHOLLY ON SAID TITLE COMPANY'S REPORT AND THEREFORE QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. THIS SURVEY COMPLIES WITH W.A.C. 332-130-145. THE CONTOURS DEPICTED HEREON ARE BASED ON DATA FROM DIRECT FIELD MEASUREMENTS. SPOT ELEVATIONS ARE BASED ON DIRECT FIELD MEASUREMENTS AND ARE DEPICTED FOR REFERENCE. THE PURPOSE OF THIS TOPOGRAPHIC MAP IS TO SERVE AS A BASE MAP FOR CONTEMPLATED SITE IMPROVEMENTS AND DESIGN.
8. WETLAND FLAG LOCATIONS SHOWN HEREON REPRESENT FIELD MEASURED POSITIONS AS DELINEATED BY GRETTE & ASSOCIATES IN 2019. WETLAND BUFFERS SHOWN HEREON ARE PER INFORMATION PROVIDED BY GRETTE & ASSOCIATES IN 2022.

LEGAL DESCRIPTIONS

THE LAND IN THE COUNTY OF PIERCE, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:

PARCEL A:

LOTS 9 THROUGH 15, BLOCK 9, PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON;

TOGETHER WITH THAT PORTION OF VACATED ASHTON WAY BETWEEN BLOCKS 8 AND 9, ABUTTING LOTS 10 TO 15, BY ORDINANCE NO. 21416, RECORDED FEBRUARY 23, 1993 UNDER RECORDING NO. 9302230756, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL B:

BLOCK 10, PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, ACCORDING TO THE PLAT RECORDED IN VOLUME 18 OF PLATS, AT PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL C:

LOTS 1 THROUGH 5, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL D:

LOTS 6 THROUGH 8, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL E:

LOTS 9 THROUGH 16, BLOCK 11 OF PORT OF TACOMA INDUSTRIAL DEVELOPMENT DISTRICT, FIRST ADDITION, AS PER PLAT RECORDED IN VOLUME 18 OF PLATS, PAGE 8, RECORDS OF PIERCE COUNTY, WASHINGTON.

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

sitts&hill
CIVIL | STRUCTURAL | ARCHITECTURAL | SURVEY
2409 N. Stevens | Tacoma, WA 98407
PHONE (253) 272-5383 | FAX (253) 272-8723
http://www.sittsandhill.com

MARK:	REVISION:	BY:	APPR:	DATE:

2.4.25

CHECKED BY DATE
APPROVED:
DIRECTOR ENG. DATE
PRINTED BY: schillingd Feb 10, 2023
PORT ADDRESS:ONE SITCUM PLAZA
TACOMA, WA 98401-1837

THORNE ROAD OFF-DOCK FACILITY
TOPOGRAPHIC SURVEY

V01.01
1 OF 13

CONT/CONS:	TOWNSHIP:	RANGE:	SECTION:
M. ID:	DAT–HRZ: WA83–SF	VERT: MLLW 19.39' @ Tide 22 1933	
PHASE:	PARCEL:	DRAWING SCALE: AS NOTED	

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE	SCALE
6/6/2025	AS NOTED
DESIGNED	CHECKED
JAT	JMB
SENIOR PM	PROJECT NAME
JAT	
DRAWING NAME	

JAMES A. TODD — STATE OF WASHINGTON — 52342 — REGISTERED PROFESSIONAL ENGINEER
6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

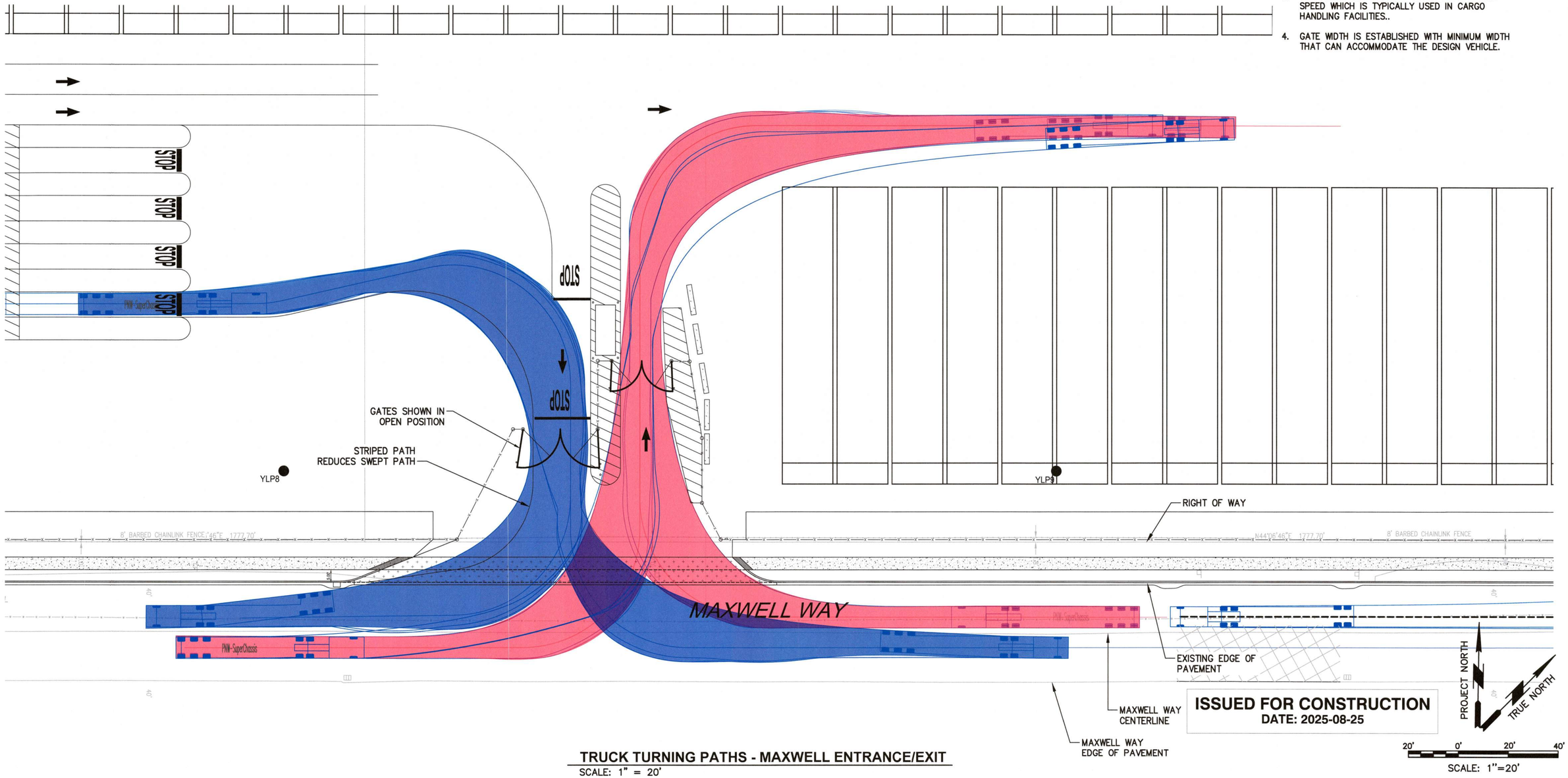
THORNE ROAD
OFF DOCK CONTAINER YARD
SITE SURVEY DATA

WO23-0096
WO-17
SHEET NO. 17 OF 46

Plotted By: Todd, James 6/6/2025 1:18 PM

NOTES:

1. RIGHTS OF WAY RESTORATION SHALL BE PER THE POLICY AS ADOPTED BY THE CITY AUGUST 2017. THE CITY OF TACOMA INSPECTOR SHALL HAVE FINAL DIRECTION FOR LIMITS OF RESTORATION.
2. TRUCK SWEPT PATHS ARE APPROXIMATE AS GENERATED BY AUTODESK VEHICLE TRACKING SOFTWARE AND USES THE MAXIMUM "SUPER CHASSIS" VEHICLE
3. THE PATHS ARE MODELED USING 5MPH DESIGN SPEED WHICH IS TYPICALLY USED IN CARGO HANDLING FACILITIES..
4. GATE WIDTH IS ESTABLISHED WITH MINIMUM WIDTH THAT CAN ACCOMMODATE THE DESIGN VEHICLE.



ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

TRUCK TURNING PATHS - MAXWELL ENTRANCE/EXIT

SCALE: 1" = 20'

				FINAL CONSTRUCTION CHECKED	DATE 6/6/2025	SCALE AS NOTED	CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS
Tacoma				BY	DESIGNED JAT	CHECKED JMB	WO23-0096
NO	REVISION	DATE	APPD	DATE	SENIOR PM JAT	PROJECT NAME	WO-18
				FIELD BOOKS	DRAWING NAME	JAMES A. TODD STATE OF WASHINGTON 52343 REGISTERED PROFESSIONAL ENGINEER 6/6/2025	THORNE ROAD OFF DOCK CONTAINER YARD **TRUCK TURNING PATHS**
							SITE AND BUILDING DIVISION
							SHEET NO. 18 OF 46 SHEET

Q:\SEA\102284-02\CADD_ACTIVE_SHEETSET\1028402_WO-18.DWG

LEGEND

- CONSTRUCTION ENTRANCE
- DEMOLITION
- SILT FENCE

SEA PAC TRANSPORT SERVICES

PENSKE TRUCK RENTAL

PABCO ROOFING PRODUCTS

WASTE MANAGEMENT

PARCEL 85

PARCEL 87

PARCEL 72

17.5
18.0
18.5
18.5
18.0
18.0
18.5
19.0
19.5
19.5
19.0
18.5
18.0

EXISTING RR TRACK, TYPICAL

1 / WO.20 STABILIZED CONSTRUCTION ENTRANCE, TYPICAL.

THORNE RD

PORT OF TACOMA ROAD

MAXWELL WAY

NEW SDCB, TYPICAL

NEW TYPE 3 SD MANHOLE

NEW SD CURB INLET, TYPICAL

EXISTING STORM DRAIN PIPING, TYPICAL

REPLACE EXISTING SD STRUCTURE

REPLACE EXISTING SD STRUCTURE

EXISTING WATER MAIN, TYPICAL

NEW SDMH ON EXISTING SD MAIN

CONNECT TO EXISTING SD STRUCTURE

REPLACE EXISTING SD STRUCTURE

NEW SD PIPE, TYPICAL

NEW SDMH ON EXISTING SD MAIN

REPLACE EXISTING SD STRUCTURE

PLAN

SCALE: 1" = 80'

NOTES:

1. SEE SHEET WO.21 FOR THE OVERALL STORMWATER SITE PLAN AND KEY MAP.
2. INSTALL CATCH BASIN FILTERS PER DETAIL 4 ON SHEET WO.20 IN ALL CATCH BASINS WITHIN 100 FEET OF THE WORK AREA.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

80'–0" 0'–0" 80'–0" 160'–0"

SCALE: 1"=80'–0"

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 05/30/25	SCALE AS NOTED
DESIGNED S.KARPA	CHECKED L.WEIDEN
SENIOR PM B.FUENTES	PROJECT NAME
DRAWING NAME WO.19	

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 48430 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

SITE AND BUILDING DIVISION

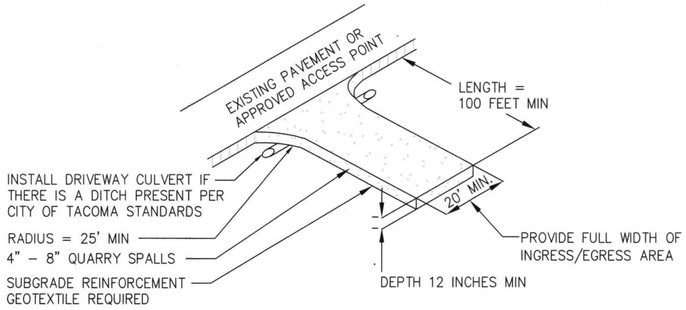
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE TESC PLAN

WO23-0096
WO.19
SHEET NO.
SHEET 19 OF 46

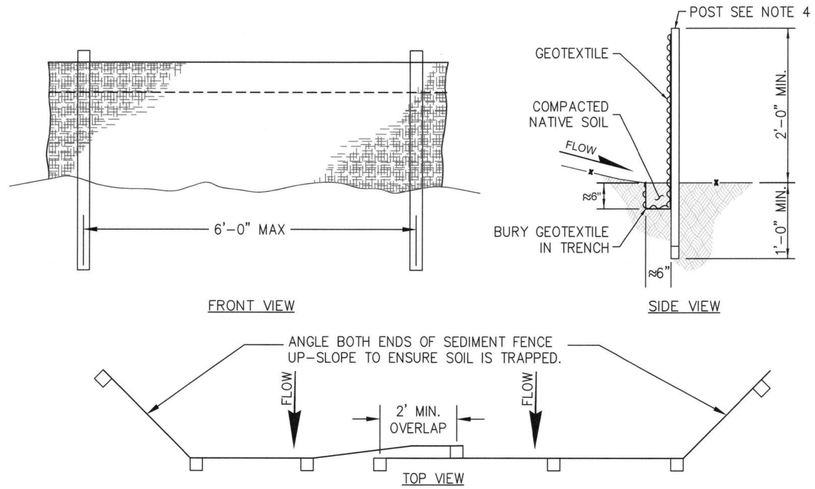
C:\BMS\KJCE-PWD\0130409\1028402-WO.19 (ROAD FRONTAGE TESC PLAN).DWG

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25



NOTES:
1. DRIVEWAY SHALL MEET REQUIREMENTS OF THE CITY OF TACOMA.
2. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF OF THE PAD.
3. RECYCLED CONCRETE CEMENT OR ASPHALT RUBBLE CANNOT BE USED FOR QUARRY SPALLS.
4. FOR RESIDENTIAL CONSTRUCTION PROVIDE STABILIZED CONSTRUCTION ENTRANCES/EXITS FOR EACH RESIDENCE. STABILIZED SURFACES SHALL BE OF SUFFICIENT LENGTH/WIDTH TO PROVIDE VEHICLE ACCESS/PARKING BASED UPON LOT SIZE AND CONFIGURATION

1 – CONSTRUCTION ENTRANCE
SCALE: NTS

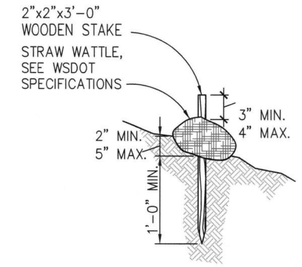


NOTES:
1. SILT FENCE EXTENTS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE EXTENTS OF THE SILT FENCE AS NECESSARY TO PREVENT SEDIMENT AND SEDIMENT–LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
2. REFER TO SPECIFICATIONS SECTION 01 57 13 FOR COMPLETE EROSION AND SEDIMENT CONTROL REQUIREMENTS.
3. BURY BOTTOM OF FILTER FABRIC 6" MIN. VERTICALLY BELOW FINISHED GRADE.
4. 2" x 2" FIR, PINE, OR STEEL FENCE POSTS.
5. STITCHED LOOPS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
6. COMPACT NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH.
7. DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE. SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.

SEDIMENT FENCE SPACING:

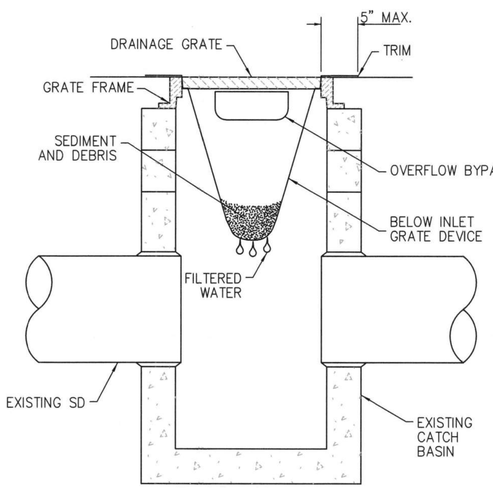
SLOPE	SPACING
<10%	300 FT.
<15%	150 FT.
<20%	100 FT.
<30%	50 FT.
<50%	25 FT.
STOCK PILE SLOPE >50%	25 FT.

2 – SILT FENCE
SCALE: NTS

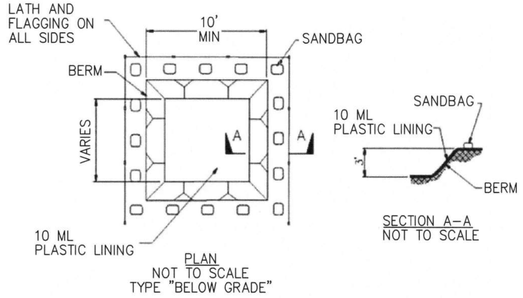


NOTE:
1. SUPPORT STRAW WATTLES WITH SAND BAGS WHERE INSTALLED ACROSS PAVEMENT.

3 – STRAW WATTLE
SCALE: NTS

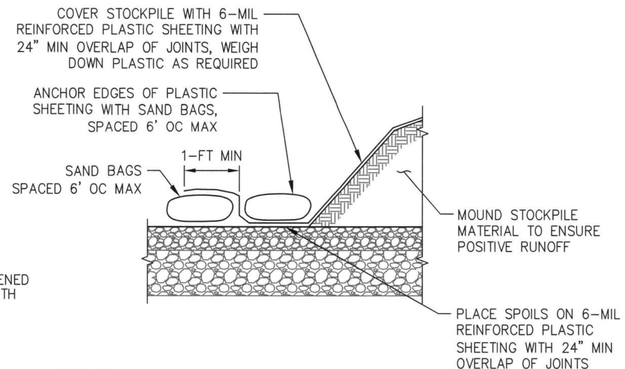


4 – CATCH BASIN FILTER
NTS



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

5 – CONCRETE WASHOUT
NTS



NOTES:
1. RIPS AND/OR TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER PER SPECIFICATION SECTION 01 57 13.
2. MATERIAL SHALL BE STOCKPILED NO STEEPER THAN 1 TO 1 SLOPE.
3. THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2 FT FROM THE EDGE OF EXCAVATION.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 10 FT.

6 – STOCKPILE DETAIL
NTS

TESC NOTES:

1. SEE SHEET C5.05 FOR CITY OF TACOMA CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS.
2. ALL PROPOSED TESC FACILITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL CONDUCT ALL EROSION AND SEDIMENT CONTROL PRACTICES IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION SWPPP.
3. THE IMPLEMENTATION OF TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, UPGRADING, AND REMOVAL OF TESC FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETE AND APPROVED.
4. TESC PLAN SHOWN HEREON IS CONSIDERED ONLY AS A BASELINE FOR CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING TESC MEASURES AS NECESSARY TO COMPLY WITH THE ECOLOGY CONSTRUCTION STORMWATER PERMIT AND LOCAL, STATE, AND FEDERAL REGULATIONS.
5. AT NO TIME SHALL MORE THAN 1/3 FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN THE STORMWATER INLET PROTECTION.
6. STABILIZATION SHALL BE PROVIDED FOR STOCKPILE(S) AND UPGRADED AS NECESSARY TO MINIMIZE SEDIMENT LOSSES, AS SHOWN HEREIN.
7. STOCKPILE(S) SHALL BE SURROUNDED BY ECOLOGY BLOCKS, BARRICADES, HIGH VISIBILITY FENCING AND/OR OTHER MEASURES TO PROVIDE FOR PUBLIC, OWNER, AND CONTRACTOR SAFETY.
8. TRACK OUT FROM THE STOCKPILE SHALL BE MINIMIZED, AND PRIOR TO FINAL CLOSEOUT, STOCKPILE AREA SHALL BE CLEARED OF ACCUMULATED OR STRAY SEDIMENT.
9. CONTRACTOR SHALL PERFORM ALL TESC MEASURES AS NECESSARY TO ENSURE NO AGGREGATE, PAVEMENT, SOIL, OR OTHER MATERIALS ARE TRACKED OUT OF THE WORK AREA.
10. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY COLLECTION AND CONVEYANCE INFRASTRUCTURE TO COLLECT ALL CONSTRUCTION STORMWATER AND DEWATERING WATER, TO TREAT IT TO MEET THE REQUIREMENTS OF THE DEPARTMENT OF ECOLOGY'S (ECOLOGY'S) CONSTRUCTIONS STORMWATER GENERAL PERMIT (CSWGP), AND SAFELY DISCHARGE THE WATER TO THE EXISTING CITY STORM SYSTEM.
11. CONTRACTOR SHALL INSTALL STORMWATER INLET PROTECTION FOR ALL INLETS WITHIN THE WORK LIMITS AND WITHIN 100' OF THE WORK LIMITS AND ALL HAUL ROUTES. SEE BMP C220: STORMWATER SYSTEM INLET PROTECTION IN 2021 CITY OF TACOMA SWMM FOR APPROPRIATE INLET PROTECTION. INLET PROTECTION SHALL BE MAINTAINED UNTIL THE INLET IS DEMOLISHED AS SHOWN HEREON OR UNTIL ALL CONSTRUCTION IS COMPLETE AND APPROVED, AS APPLICABLE.
12. ALL TESC FACILITIES SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION ACTIVITIES AND IN SUCH A MANNER AS TO ENSURE THAT CONSTRUCTION STORMWATER WHICH DOES NOT MEET THE REQUIREMENTS OF ECOLOGY'S CSWGP DOES NOT ENTER THE EXISTING DRAINAGE SYSTEM OR ADJACENT WATER BODY, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
13. TESC FACILITIES SHALL BE UPGRADED AS NECESSARY TO ENSURE THAT SEDIMENT AND SEDIMENT–LADEN WATER DOES NOT LEAVE THE SITE.

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE
FIELD BOOKS
DATE 05/30/25 | SCALE AS NOTED
DESIGNED S.KARPA | CHECKED L.WEIDEN
SENIOR PM B.FUENTES | PROJECT NAME
DRAWING NAME WO.20

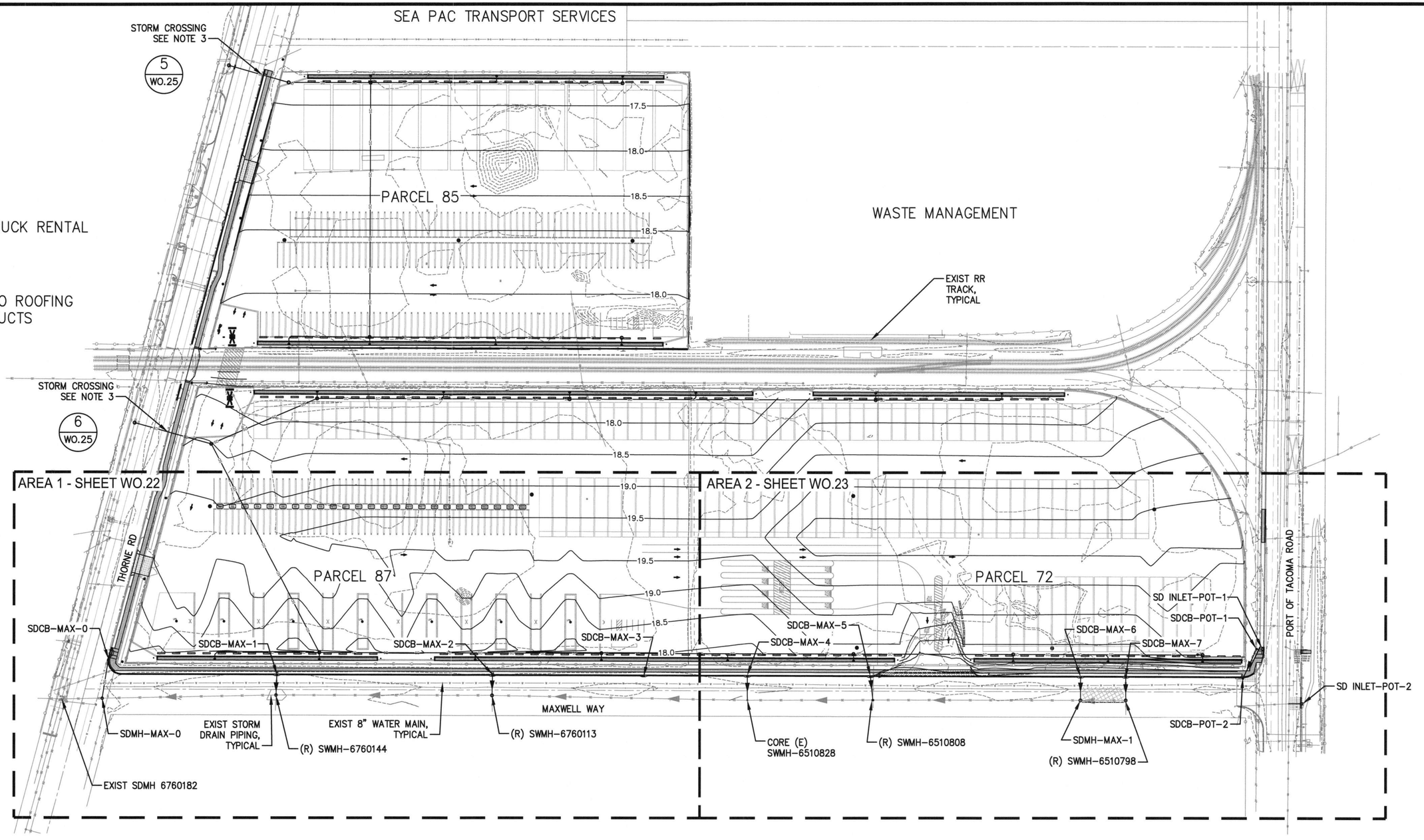
BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 49439 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE TESC NOTES AND DETAILS

WO23-0096
WO.20
SHEET NO.
SHEET 20 OF 46

C:\BM\SK.ICE-PW\D0130409\1028402-WO.20 (ROAD FRONTAGE TESC NOTES AND DETAILS).DWG



PLAN
SCALE: 1" = 80'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

80'–0" 0'–0" 80'–0" 160'–0"
SCALE: 1"=80'–0"

NOTES:

1. WORK SHOWN HEREON REQUIRES CONNECTING NEW DRAINAGE INFRASTRUCTURE TO EXISTING STORM MANHOLES. CONTRACTOR SHALL VERIFY EXISTING MANHOLE CONDITIONS, SIZE, AND DIMENSIONS ARE SUITABLE FOR RE-USE AND CONNECTION PRIOR TO MAKING THE CONNECTION.
2. NEW STORMWATER DRAINAGE LATERALS ARE SHOWN TO CROSS OVER OR UNDER EXISTING WATERLINES ALONG MAXWELL WAY AND PORT OF TACOMA ROAD. CONTRACTOR SHALL POTHOLE THE WATERLINES PRIOR CONSTRUCTING ANY DRAINAGE LATERALS TO CONFIRM THE CROSSING CAN BE CONSTRUCTED.
3. STORM DRAIN PROFILES FOR THE PORTION OF PIPING CROSSING THORNE ROAD ARE SHOWN ON DETAILS 5 AND 6 ON SHEET WO.25. REFER TO SDEV #23-0193 DRAWINGS FOR THE COMPLETE PROFILES.

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 05/30/25	SCALE AS NOTED		
DESIGNED S.KARPA	CHECKED L.WEIDEN		
SENIOR PM B.FUENTES	PROJECT NAME		
DRAWING NAME WO.21			

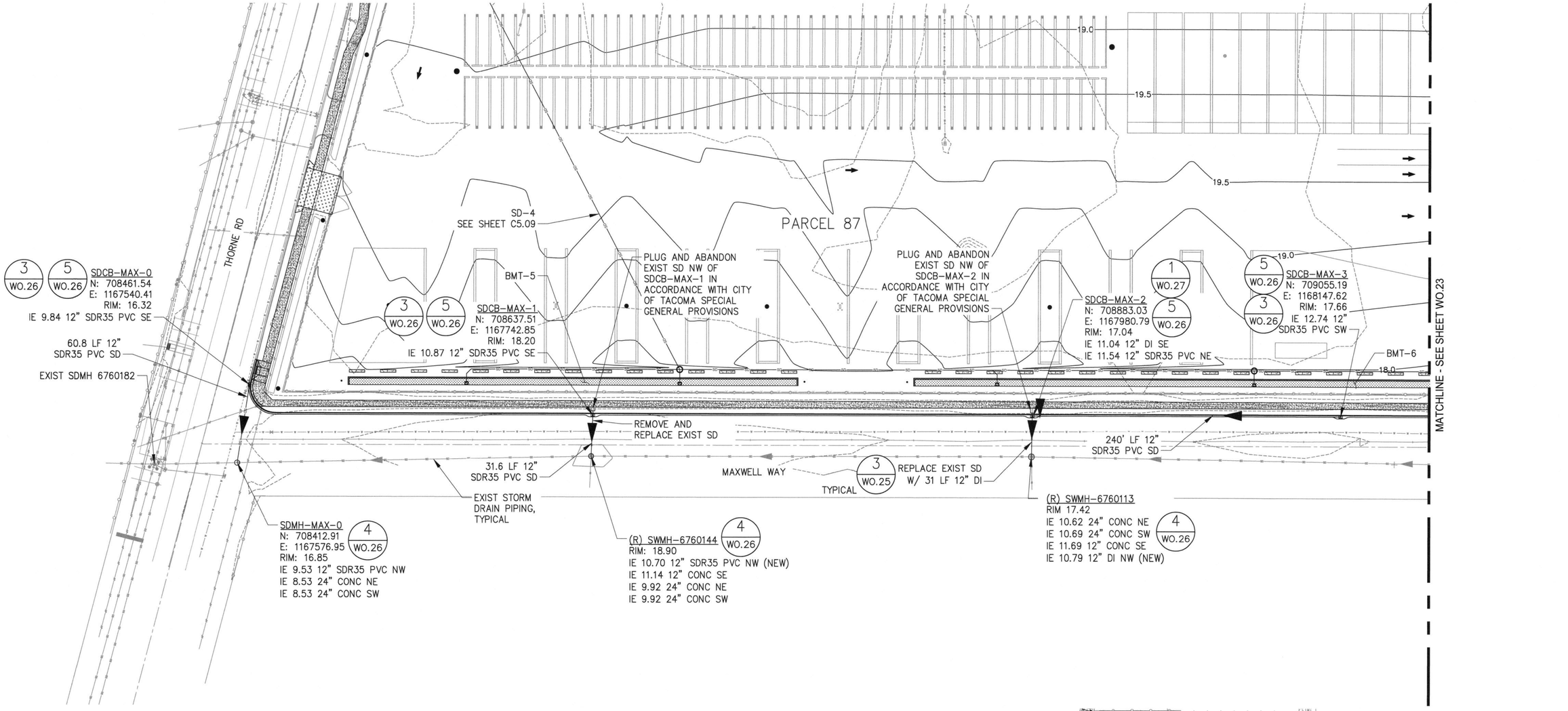
BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 49432 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER SITE PLAN, KEY MAP, AND GENERAL NOTES

WO23-0096
WO.21
SHEET NO. 21 OF 46

C:\BMS\KJCE-PWD\0130409\1028402-WO.21 (ROAD FRONTAGE STORMWATER SITE PLAN, KEY MAP, AND GENERAL NOTES).DWG

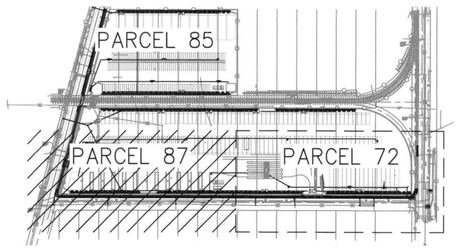


PLAN
SCALE: 1" = 40'

NOTES:

1. SEE SHEET WO.24 FOR TYPICAL STORM DRAIN LATERAL SECTION AND SEE SHEETS WO.28 AND WO.29 FOR LATERAL PROFILES.
2. WORK SHOWN HEREON REQUIRES CONNECTING NEW DRAINAGE INFRASTRUCTURE TO EXISTING STORM MANHOLES OR PIPING. CONTRACTOR SHALL VERIFY EXISTING MANHOLE OR PIPING CONDITIONS, SIZE, AND DIMENSIONS ARE SUITABLE FOR RE-USE AND CONNECTION PRIOR TO MAKING THE CONNECTION. CONTRACTOR SHALL VERIFY WITH CITY OF TACOMA INSPECTOR THAT STRUCTURE CAN BE REUSED PRIOR TO MAKING THE CONNECTION.
3. CONTRACTOR SHALL POTHOLE EXISTING WATERLINE ALONG MAXWELL WAY PRIOR TO CONSTRUCTING DRAINAGE LATERALS.
4. JOINTS ALONG NEW STORM DRAIN LATERALS SHALL BE SPACED EQUI-DISTANT FROM EACH OTHER AND SHALL NOT OCCUR WHERE STORM CROSSES OVER THE WATER MAIN.
5. TPU WATER INSPECTOR MUST BE ONSITE DURING INSTALLATION OF STORMWATER LINES TO VERIFY WATER PIPE CONDITION.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25



KEY PLAN
NOT TO SCALE

80'-0" 0'-0" 40'-0" 80'-0"
SCALE: 1"=40'-0"

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE	SCALE
05/30/25	AS NOTED
DESIGNED	CHECKED
S.KARPA	L.WEIDEN
SENIOR PM	PROJECT NAME
B.FUENTES	
DRAWING NAME	
WO.22	

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 40470 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER ENLARGED PLAN 01

WO23-0096
WO.22
SHEET NO.
SHEET 22 OF 46

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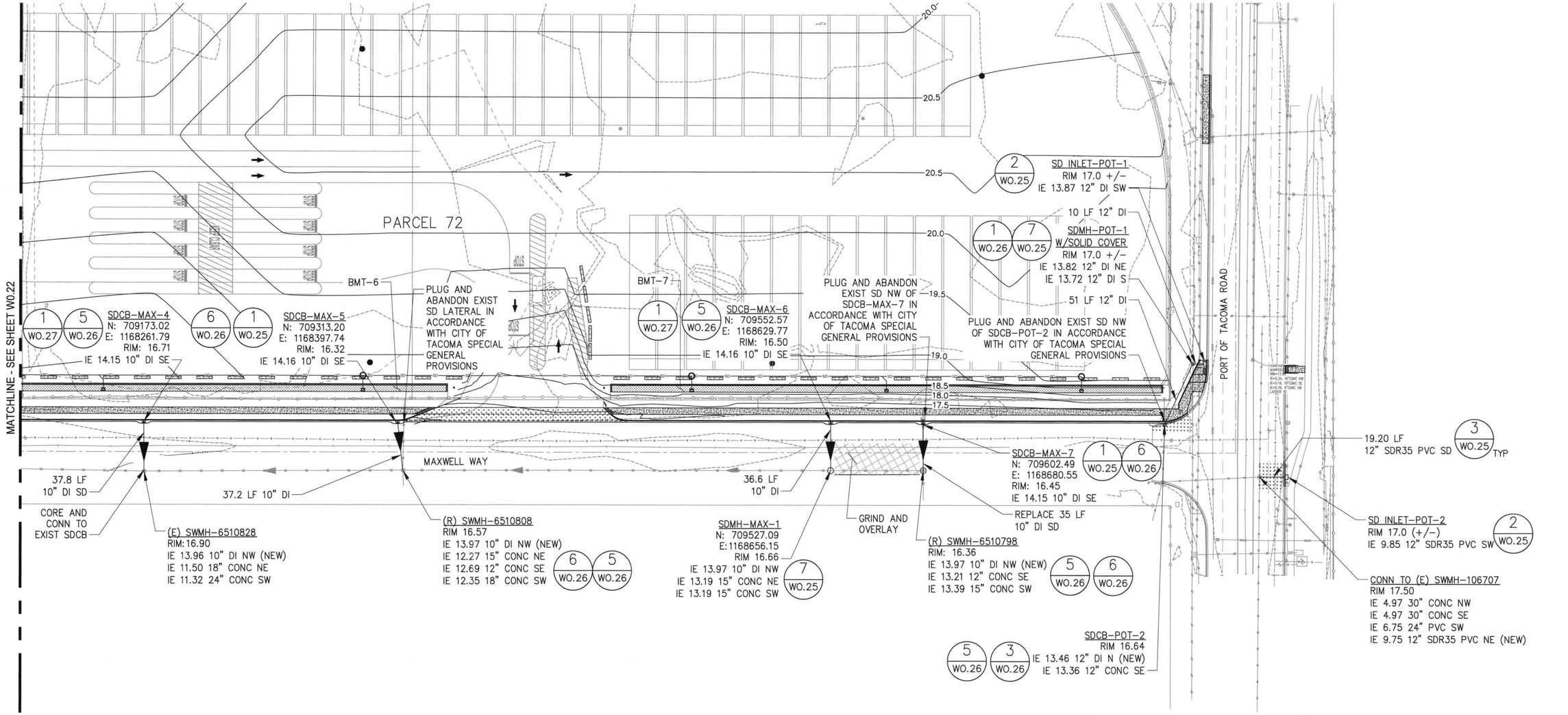
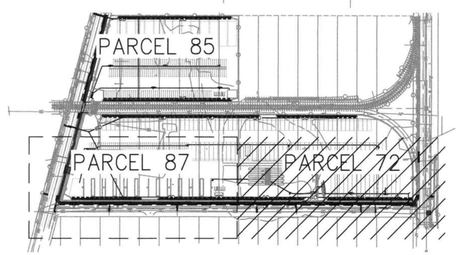


PLAN
SCALE: 1" = 40'

NOTES:

1. SEE SHEET W0.24 FOR TYPICAL STORM DRAIN LATERAL SECTION AND SEE SHEETS W0.28 AND W0.29 FOR LATERAL PROFILES.
2. WORK SHOWN HEREON REQUIRES CONNECTING NEW DRAINAGE INFRASTRUCTURE TO EXISTING STORM MANHOLES OR PIPING. CONTRACTOR SHALL VERIFY EXISTING MANHOLE OR PIPING CONDITIONS, SIZE, AND DIMENSIONS ARE SUITABLE FOR RE-USE AND CONNECTION PRIOR TO MAKING THE CONNECTION. CONTRACTOR SHALL VERIFY WITH CITY OF TACOMA INSPECTOR THAT STRUCTURE CAN BE REUSED PRIOR TO MAKING CONNECTION.
3. CONTRACTOR SHALL POTHOLE EXISTING WATERLINES ALONG MAXWELL WAY AND PORT OF TACOMA ROAD PRIOR TO CONSTRUCTING DRAINAGE LATERALS.
4. JOINTS ALONG NEW STORM DRAIN LATERALS SHALL BE SPACED EQUI-DISTANT FROM EACH OTHER AND SHALL NOT OCCUR WHERE STORM CROSSES OVER WATER MAIN.
5. TPU WATER INSPECTOR MUST BE ONSITE DURING INSTALLATION OF STORMWATER LINES TO VERIFY WATER PIPE CONDITION.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25



KEY PLAN
NOT TO SCALE

80'-0" 0'-0" 40'-0" 80'-0"
SCALE: 1"=40'-0"

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 05/30/25 | SCALE AS NOTED
DESIGNED S.KARPA | CHECKED L.WEIDEN
SENIOR PM B.FUENTES | PROJECT NAME
DRAWING NAME WO.23

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 45870 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER ENLARGED PLAN 02

WO23-0096
WO.23
SHEET NO.
23 OF 46
SHEET

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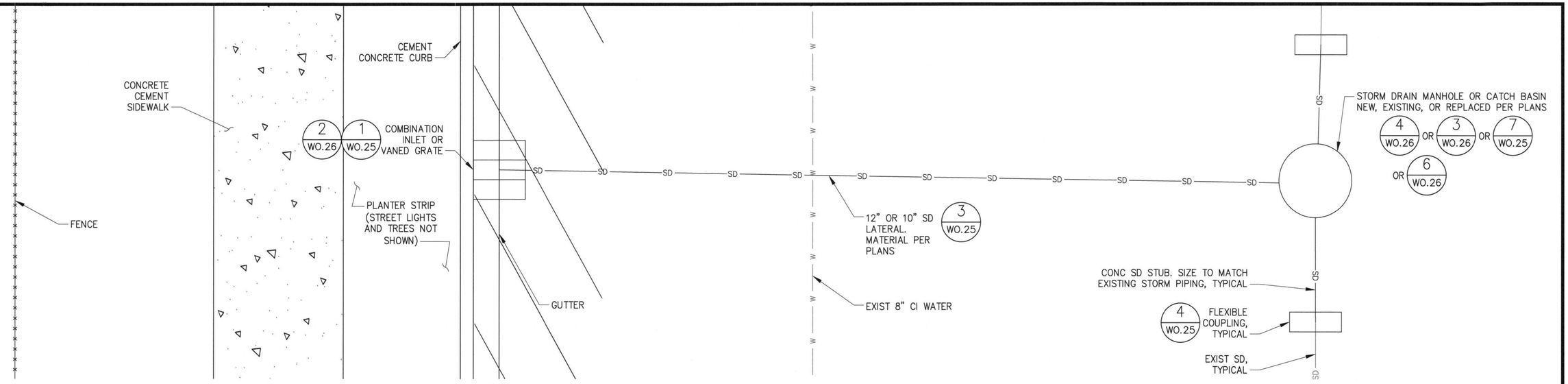
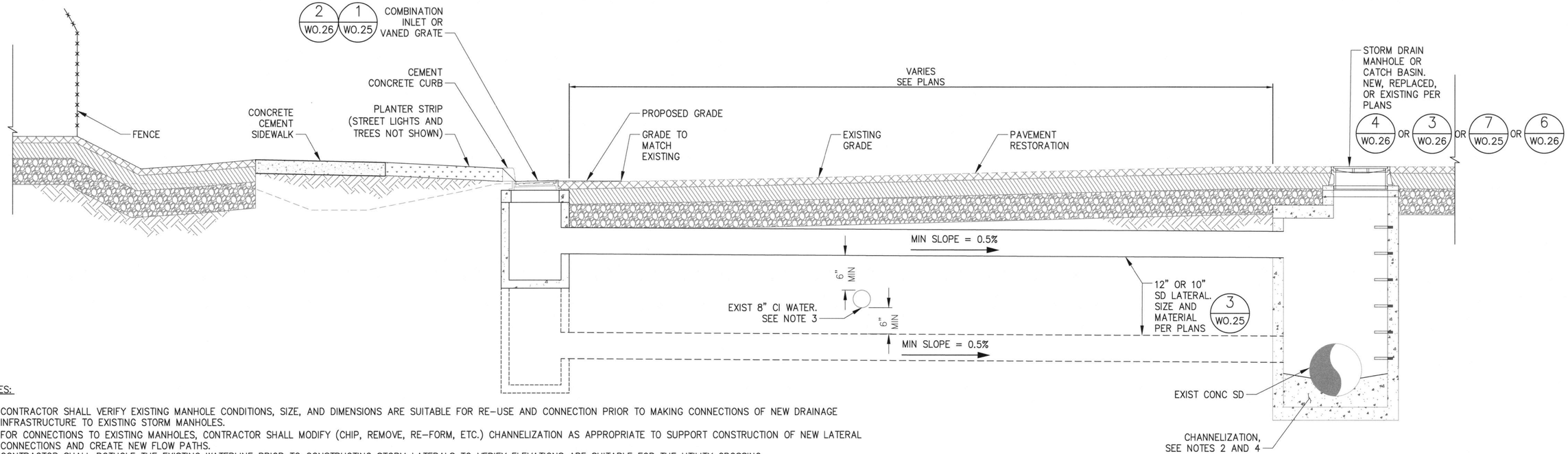


A – TYPICAL STORM DRAIN LATERAL PLAN
1"=2'



NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING MANHOLE CONDITIONS, SIZE, AND DIMENSIONS ARE SUITABLE FOR RE-USE AND CONNECTION PRIOR TO MAKING CONNECTIONS OF NEW DRAINAGE INFRASTRUCTURE TO EXISTING STORM MANHOLES.
2. FOR CONNECTIONS TO EXISTING MANHOLES, CONTRACTOR SHALL MODIFY (CHIP, REMOVE, RE-FORM, ETC.) CHANNELIZATION AS APPROPRIATE TO SUPPORT CONSTRUCTION OF NEW LATERAL CONNECTIONS AND CREATE NEW FLOW PATHS.
3. CONTRACTOR SHALL POTHOLE THE EXISTING WATERLINE PRIOR TO CONSTRUCTING STORM LATERALS TO VERIFY ELEVATIONS ARE SUITABLE FOR THE UTILITY CROSSING.
4. CHANNELIZATION SHALL BE INSTALLED IN CITY TYPE 1 AND TYPE 3 MANHOLES. WSDOT TYPE 1 AND 2 CATCH BASINS SHALL HAVE A SUMP PER DETAILS 6/WO.26 AND 3/WO.26.

A – TYPICAL STORM DRAIN LATERAL SECTION
1"=2'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

C:\BMS\KJCE-PW\D0130409\1028402-WO.24 (ROAD FRONTAGE STORM DRAIN LATERAL TYPICAL SECTION).DWG

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

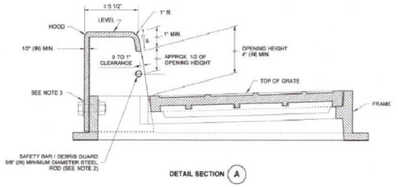
DATE: 05/30/25 SCALE: AS NOTED
DESIGNED: S.KARPA CHECKED: L.WEIDEN
SENIOR PM: B.FUENTES PROJECT NAME:
DRAWING NAME: WO.24

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORM DRAIN LATERAL TYPICAL SECTION

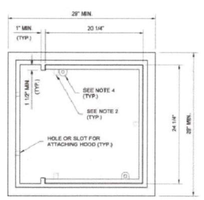
WO23-0096
WO.24
SHEET NO. 24 OF 46



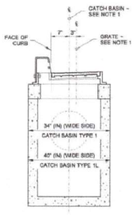
DETAIL SECTION (A)

NOTES

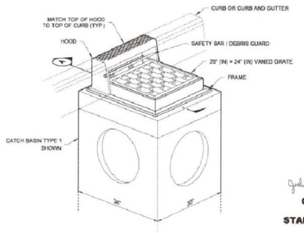
1. This inlet requires the precast catch basin unit to be rotated 90 degrees so that the narrow side is parallel to the curb line. When calculating offsets from curb to centerline (CL) of the precast catch basin, please note that the CL of the grate is not the CL of the precast catch basin. See **Section A.**
2. The dimensions of the frame and hood may vary slightly among different manufacturers. The Frame may have cast features intended to support a debris guard. Hood units may be mounted inside or outside of the frame. The methods for fastening the safety bar / debris guard rod to the hood may vary. The hood may include casting lugs. The top of the hood may be cast with a pattern.
3. Attach the hood to the frame with two 3/4" (in) × 2" (in) hex head bolts, nuts, and oversize washers. The washers shall have diameters adequate to ensure full bearing across the slots.
4. Bolt-down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide two holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer. See **BOLT-DOWN DETAIL, Standard Plan B-30.16.**
5. Only ductile iron Vaned Grates shall be used. See **Standard Plans B-30.30 and B-30.40** for grate details. Refer to **Standard Specification Section 9-05.15(2)** for additional requirements.
6. This plan is intended to show the installation details of a manufactured product. This plan is not intended to show the specific details necessary to fabricate the castings depicted in this drawing.



TOP VIEW
FRAME DETAIL



SECTION (A)



ISOMETRIC VIEW
COMBINATION INLET FRAME, HOOD, AND VANED GRATE

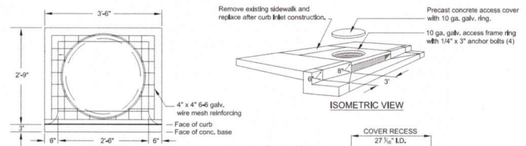
COMBINATION INLET

STANDARD PLAN B-25.20-02

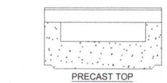
SHEET 1 OF 1 SHEET

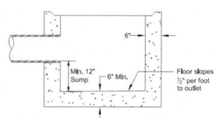
NOTE: THIS DETAIL APPLIES TO STRUCTURES SDCB-MAX-5 AND SDCB-MAX-7

1 / – COMBINATION INLET (B-25.20-02)
NTS

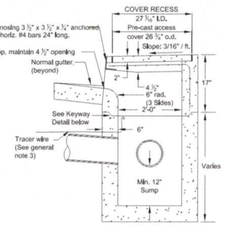


ISOMETRIC VIEW





SECTION



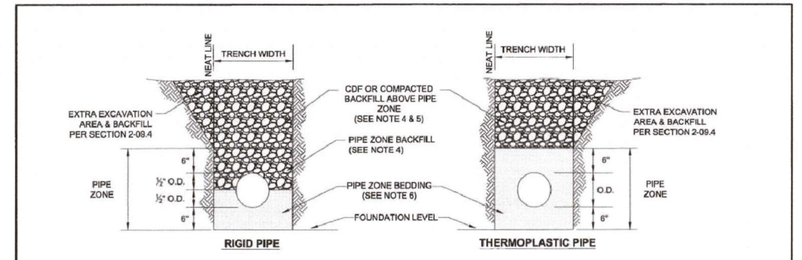
SECTION
Note: All dimensions nominal

KEYWAY DETAIL

NOTES:

1. MATERIALS SHALL MEET THE REQUIREMENTS OF WSDOT STD SPEC 7-05.2 AND 9-05.50(4).
2. PIPES SHALL BE FLUSH WITH INSIDE WALL.
3. ALL METAL PARTS THAT MAY BE EXPOSED TO STORMWATER SHALL BE 316 STAINLESS STEEL.
4. THIS DETAIL APPLIES TO STRUCTURES SD INLET-POT-1 AND SD INLET-POT-2

2 / – CONCRETE CURB INLET
NTS

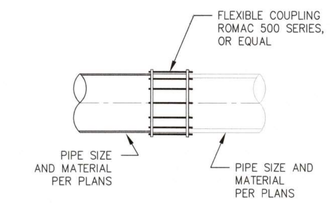


NOTES:

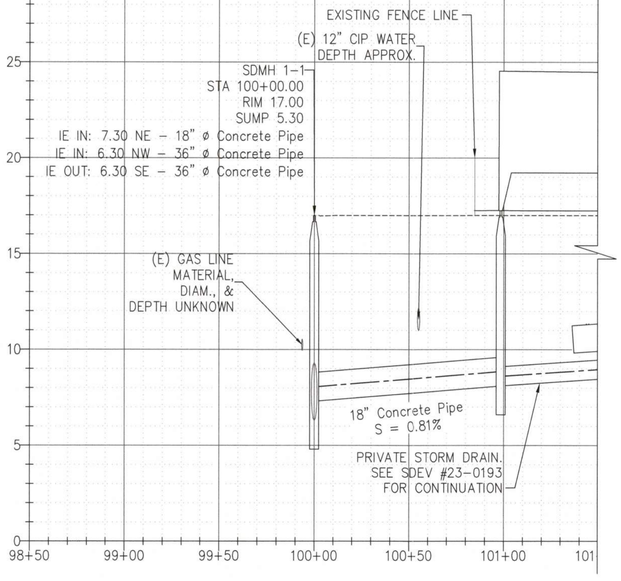
1. Provide uniform support under barrel and provide pockets in bedding for pipe bells.
2. Hand tamp under haunches.
3. Trench width shall be as specified in Section 2-09.4 of the WSDOT Standard Specifications.
4. Pipe zone backfill and backfill above pipe zone shall meet the material requirements of WSDOT Standard Specification Section 9-03.12(2) for gravel backfill for walls.
5. All trenches shall be compacted in accordance with SU-28.
6. Pipe zone bedding shall meet the material requirements of WSDOT Standard Specification Section 9-03.9(3) for crushed surfacing top course.

REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	GMS ENVIRONMENTAL SERVICES		PIPE ZONE BEDDING AND BACKFILL FOR SANITARY AND STORM SEWERS
NA TACOMA POWER	NA TACOMA WATER	CITY ENGINEER 8/16/16 DATE	STANDARD PLAN NO. SU-16

3 / – PIPE ZONE BEDDING AND BACKFILL DETAIL (SU-16)
NTS

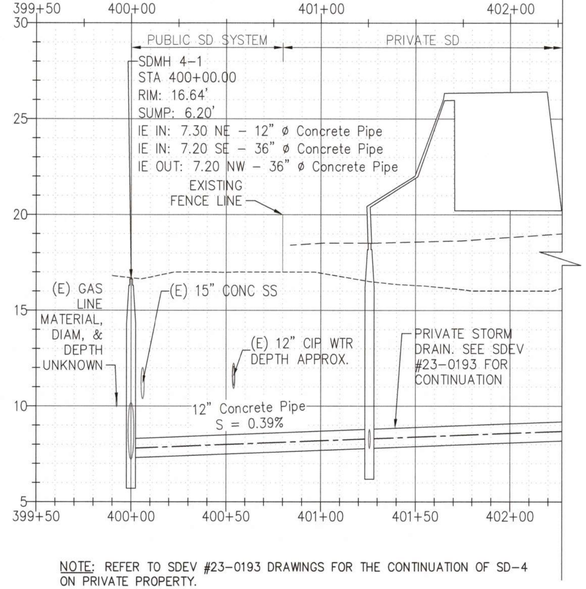


4 / – FLEXIBLE COUPLING DETAIL
NTS



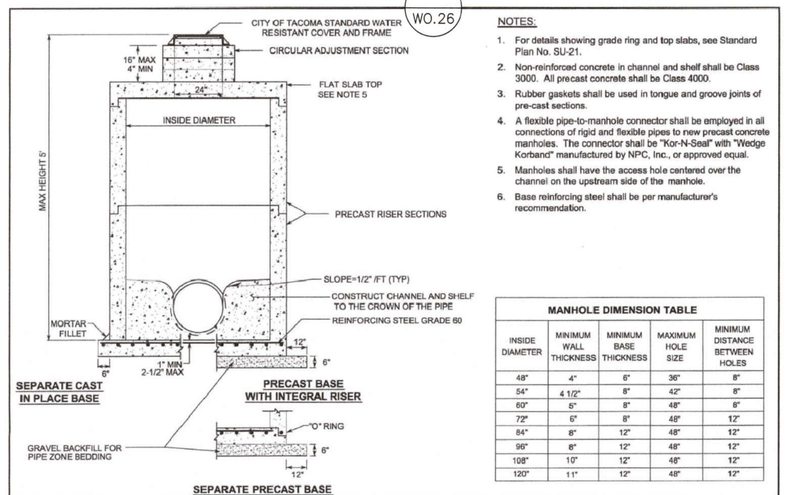
NOTE: REFER TO SDEV #23-0193 DRAWINGS FOR THE CONTINUATION OF SD-1 ON PRIVATE PROPERTY.

5 / – STORM CROSSING #1 @ THORNE RD.
NTS



NOTE: REFER TO SDEV #23-0193 DRAWINGS FOR THE CONTINUATION OF SD-4 ON PRIVATE PROPERTY.

6 / – STORM CROSSING #2 @ THORNE RD.
NTS



1 / WO.26

NOTES:

1. For details showing grade ring and top slabs, see Standard Plan No. SU-21.
2. Non-reinforced concrete in channel and shelf shall be Class 3000. All precast concrete shall be Class 4000.
3. Rubber gaskets shall be used in tongue and groove joints of pre-cast sections.
4. A flexible pipe-to-manhole connector shall be employed in all connections of rigid and flexible pipes to new precast concrete manholes. The connector shall be "Kor-N-Seal" with "Wedge Korband" manufactured by NPC, Inc., or approved equal.
5. Manholes shall have the access hole centered over the channel on the upstream side of the manhole.
6. Base reinforcing steel shall be per manufacturer's recommendation.

MANHOLE DIMENSION TABLE

INSIDE DIAMETER	MINIMUM WALL THICKNESS	MINIMUM BASE THICKNESS	MAXIMUM HOLE SIZE	MINIMUM DISTANCE BETWEEN HOLES
48"	4"	6"	36"	8"
54"	4 1/2"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	48"	12"
84"	8"	12"	48"	12"
96"	8"	12"	48"	12"
108"	10"	12"	48"	12"
120"	11"	12"	48"	12"

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	MANHOLE TYPE 3 5' MAXIMUM HEIGHT
	CITY ENGINEER 1/10/14 DATE	STANDARD PLAN NO. SU-19

NOTE: THIS DETAIL APPLIES TO STRUCTURE SDMH-POT-1 AND SDMH-MAX-1

7 / – MANHOLE TYPE 3 DETAIL (SU-19)
NTS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 05/30/25 | SCALE: AS NOTED
DESIGNED: S.KARPA | CHECKED: L.WEIDEN
SENIOR PM: B.FUENTES | PROJECT NAME
DRAWING NAME: WO.25

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 48439 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER DETAILS 01

WO23-0096
WO.25
SHEET NO.
SHEET 25 OF 46

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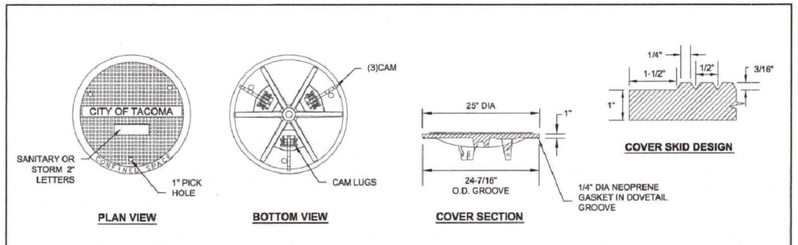


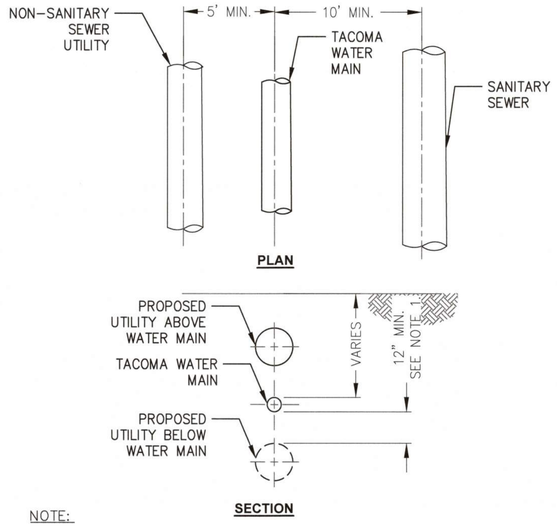
NOTES:

1. Covers shall have the word "SANITARY" in 2 inch raised letters when used with sanitary sewer installations, or "STORM" when installed with storm sewers. All covers shall have the words "CITY OF TACOMA" in 1-1/2 inch raised letters and the words "CONFINED SPACE" in 1-inch raised letters.
2. Lids must be interchangeable, any lid shall fit any and all frames.
3. Frame and cover shall be designed for H-20 loading.
4. Frame shall be grey-iron conforming to the requirements of AASHTO M 105, grade 30B.
5. Covers shall be ductile iron conforming to ASTM A 536, grade 80-55-06.
6. Per WSDOT Standard Specification 9-05.15, metal castings shall not be dipped, painted, welded, plugged, or repaired.

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION CITY ENGINEER _____ DATE 1/07/14	MANHOLE FRAME AND COVER STANDARD PLAN NO. SU-22

NOTE: THIS DETAIL APPLIES TO STRUCTURES SDMH–MAX–0, SWMH–6760144, SDMH–POT–1, AND SWMH–6760113.

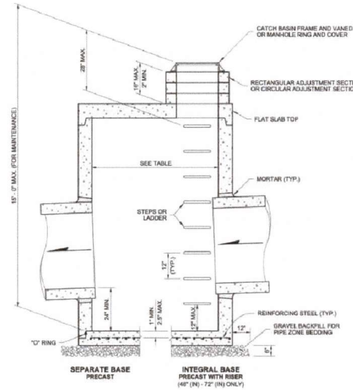
1 – MANHOLE FRAME AND COVER DETAIL (SU–22)
SCALE: NTS



NOTE:

1. FOR ALL UTILITIES OTHER THAN SANITARY SEWER, THE PROPOSED UTILITY SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 5 FEET AND VERTICAL SEPARATION OF 12" FROM TACOMA WATER FACILITIES.
2. IN SELECTED CASES, VERTICAL CLEARANCES FROM WATER MAIN SHALL BE 6" MINIMUM AS SHOWN ON SHEETS WO.22 AND WO.23.

2 – TYPICAL UTILITY SEPARATIONS
SCALE: NTS



NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. 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**.

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"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES

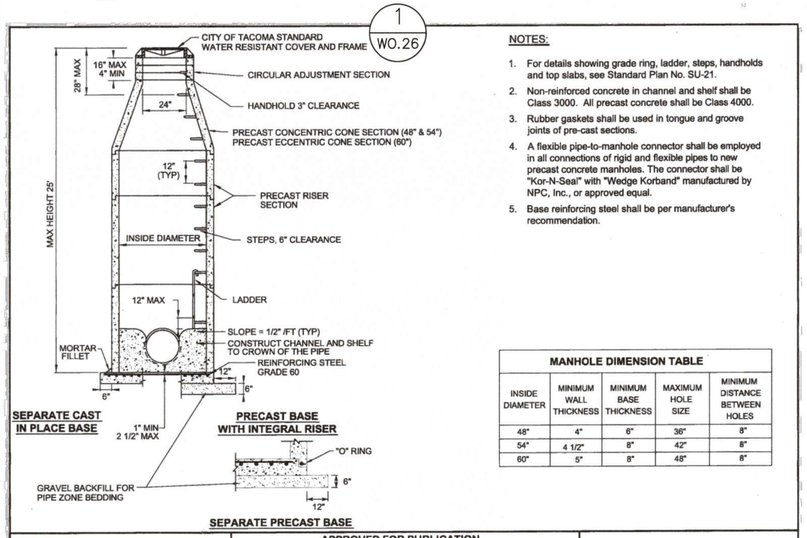
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ① PP ④	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	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**)

Fleitman, Julie Feb 20 2018 12:49 PM
CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-02
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Washington State Department of Transportation

NOTE: THIS DETAIL APPLIES TO STRUCTURES SDCB–MAX–0, SDCB–MAX–1, SDCB–MAX–3, AND SDCB–POT–2.

3 – CATCH BASIN TYPE 2 (B–10.20–02)
SCALE: NTS



NOTES:

1. For details showing grade ring, ladder, steps, handholds and top slabs, see Standard Plan No. SU-21.
2. Non-reinforced concrete in channel and shelf shall be Class 3000. All precast concrete shall be Class 4000.
3. Rubber gaskets shall be used in tongue and groove joints of pre-cast sections.
4. A flexible pipe-to-manhole connector shall be employed in all connections of rigid and flexible pipes to new precast concrete manholes. The connector shall be "Kor-N-Seal" with "Wedge Korband" manufactured by NPC, Inc., or approved equal.
5. Base reinforcing steel shall be per manufacturer's recommendation.

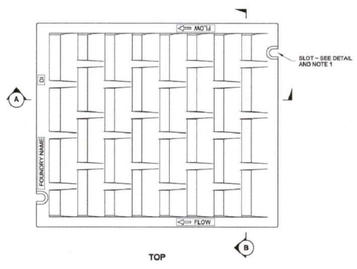
MANHOLE DIMENSION TABLE

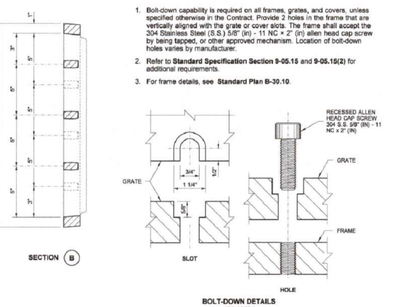
INSIDE DIAMETER	MINIMUM WALL THICKNESS	MINIMUM BASE THICKNESS	MAXIMUM HOLE SIZE	MINIMUM DISTANCE BETWEEN HOLES
48"	4"	6"	36"	8"
54"	4 1/2"	8"	42"	8"
60"	5"	8"	48"	8"

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION CITY ENGINEER _____ DATE 1/07/14	MANHOLE-TYPE 1 48", 54" AND 60" STANDARD PLAN NO. SU-17

NOTE: THIS DETAIL APPLIES TO STRUCTURES SDMH–MAX–0, SWMH–6760144, AND SWMH–6760113.

4 – MANHOLE TYPE 1 (SU–17)
SCALE: NTS





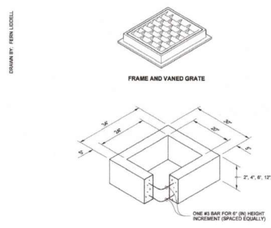
NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
3. For frame details, see **Standard Plan B-30.10**.

Fleitman, Julie Feb 20 2018 12:51 PM
RECTANGULAR VANED GRATE
STANDARD PLAN B-30.30-03
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Washington State Department of Transportation

NOTE: THIS DETAIL APPLIES TO SDCB–MAX–0, SDCB–MAX–1, SDCB–MAX–2, SDCB–MAX–3, SDCB–MAX–4, SDCB–MAX–6, SWMH–6510808, SWMH–6510798, AND SDCB–POT–2.

5 – RECTANGULAR VANED GRATE (B–30.30–03)
SCALE: NTS

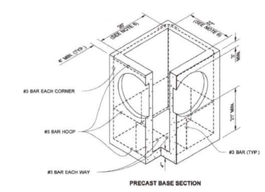


PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	18"
CPSSP ★ (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	18"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	18"

★ CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, floors (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.



Julie Hellman 2020.09.01 07:52:50 -07'00'
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 DN: cn=Roark, Steve, o=WA St Dept of Transportation, ou=STATE DESIGN ENGINEER, email=roarks@wsdot.wa.gov, c=US Date: 2020.09.01 08:44:12 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

NOTE: THIS DETAIL APPLIES TO SDCB–MAX–5, SWMH–6510808, SDCB–MAX–7, AND SWMH–6510798.

6 – CATCH BASIN TYPE 1 (B–5.20–03)
SCALE: NTS

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY _____ DATE _____ FIELD BOOKS

DATE	SCALE
05/30/25	AS NOTED
DESIGNED S.KARPA	CHECKED L.WEIDEN
SENIOR PM B.FUENTES	PROJECT NAME
DRAWING NAME WO.26	

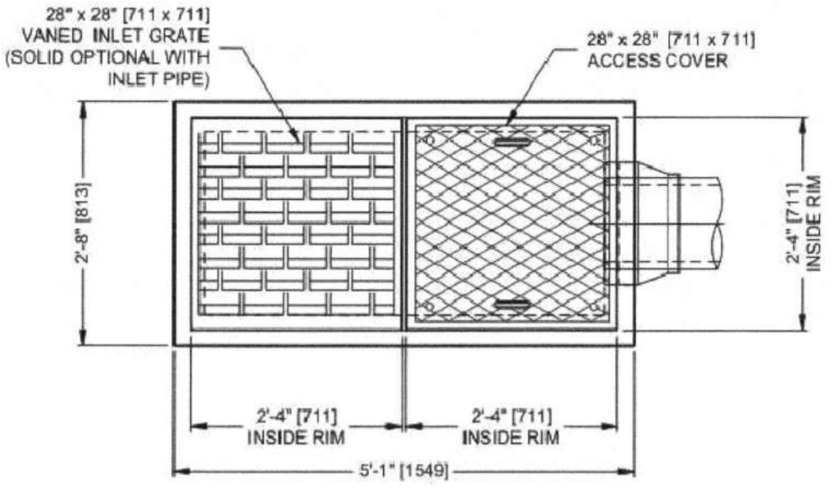
BENJAMIN EDWARD FUENTES, STATE OF WASHINGTON, 49479, REGISTERED PROFESSIONAL ENGINEER, 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

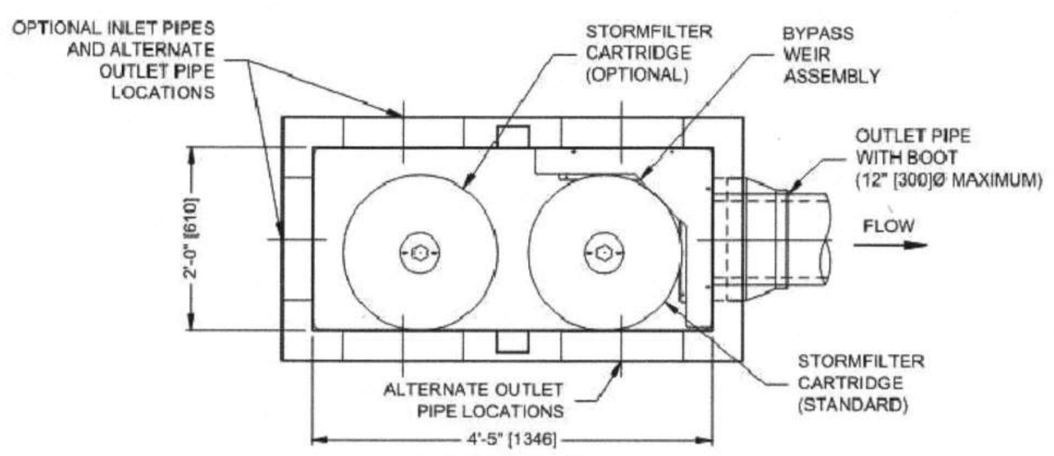
THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER DETAILS 02

WO23-0096
WO.26
SHEET NO. 26 OF 46

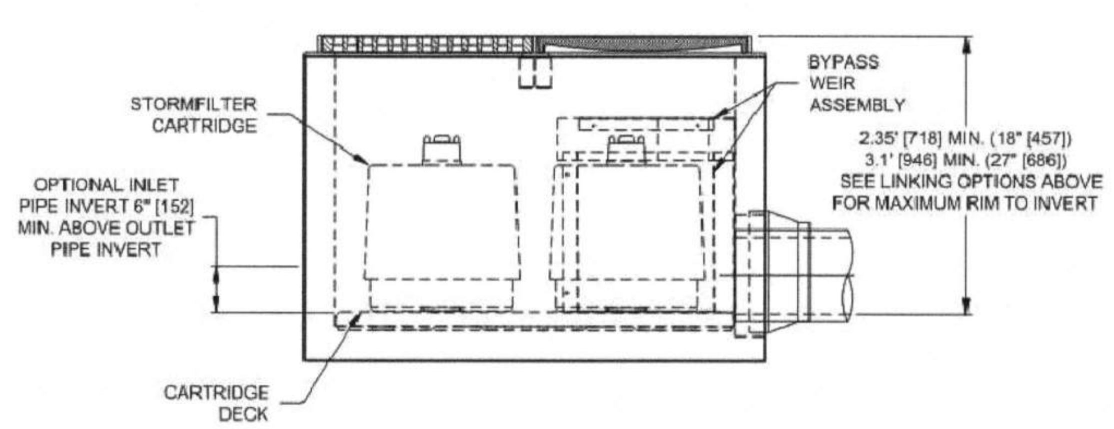
C:\BM\SIK\CE-PWD\0130409\1028402-WO.26 (ROAD FRONTAGE STORMWATER DETAILS 02).DWG



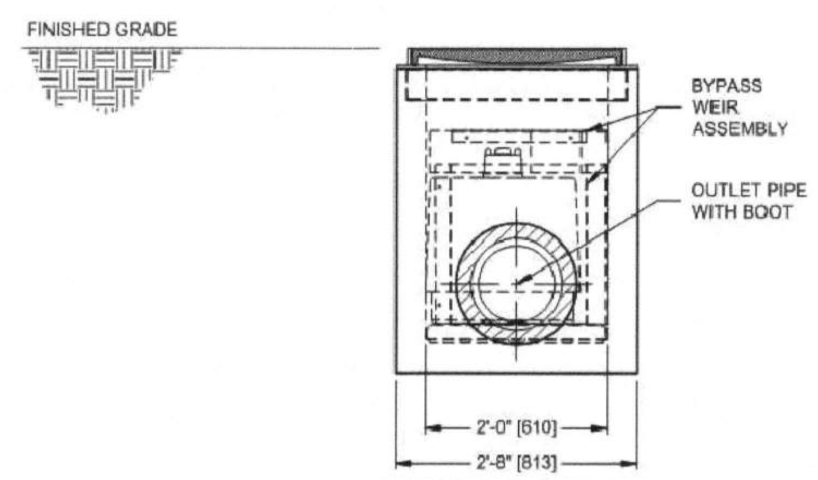
PLAN VIEW



PLAN VIEW
CASTINGS NOT SHOWN



ELEVATION VIEW



RIGHT SIDE VIEW

The Stormwater Management StormFilter®

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: ... RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING

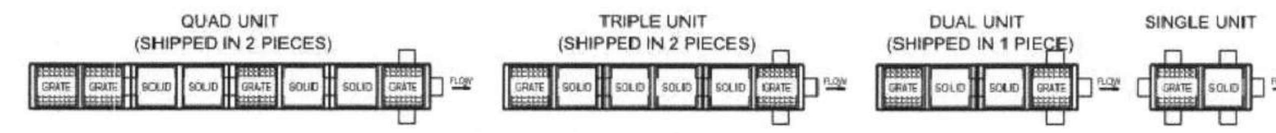
STORMFILTER DESIGN NOTES

- CONCRETE CATCHBASIN STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCAL APPROVALS
- PEAK CONVEYANCE CAPACITY IS 1.3 CFS
- CONCRETE CATCHBASIN STORMFILTER IS AVAILABLE WITH UP TO TWO (2), 18" [457] OR 27" [686] TALL CARTRIDGES
- UP TO 4 INDIVIDUAL UNITS MAY BE LINKED FOR AN ULTIMATE CAPACITY OF EIGHT (8) CARTRIDGES

CARTRIDGE SIZE (in. [mm])	27 [686]			18 [457]		
RECOMMENDED HYDRAULIC DROP (ft. [mm])	3.05 [930]			2.3 [701]		
SPECIFIC FLOW RATE (gpm/sf [L/s/m²])	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]
CARTRIDGE FLOW RATE (gpm [L/s])	22.5 [1.4]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.47]

* 1.67 gpm/sf [1.13 L/s/m²] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

LINKING OPTIONS SHOWN BELOW. FLEXIBLE INLET PIPE, GRATED AND SOLID COVER PLACEMENT. CONTACT YOUR CONTECH REPRESENTATIVE FOR MORE INFORMATION



MAXIMUM RIM TO OUTLET PIPE INVERT HEIGHT IS 6.05' [1844].

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. ALTERNATE DIMENSIONS ARE MILLIMETERS [mm] UNLESS NOTED OTHERWISE.
4. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
5. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM [L/S]) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF [m²]).
8. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 0'-2" [51] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.

INSTALLATION NOTES
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
3. CONTRACTOR TO PROVIDE AND INSTALL PIPES. MATCH PIPE INVERTS SHOWN ON PROJECT SPECIFIC DRAWINGS.
4. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
CARTRIDGE SIZE (27, 18)			
CARTRIDGE FLOW RATE			
MEDIA TYPE (PERLITE, ZPG, PSORB)			
NUMBER OF CARTRIDGES REQUIRED			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES/SPECIAL REQUIREMENTS:			

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONCRETE CATCHBASIN
STORMFILTER
STANDARD DETAIL

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			SDCB-MAX-2
WATER QUALITY FLOW RATE (cfs[L/s])			0.0432
PEAK FLOW RATE (cfs[L/s])			0.17
RETURN PERIOD OF PEAK FLOW (yrs)			100
CARTRIDGE SIZE, (27,18)			27
CARTRIDGE FLOW RATE			
MEDIA TYPE (PERLITE, ZPG, PSORB)			ZPG
NUMBER OF CARTRIDGES REQUIRED			2
RIM ELEVATION			17.04
PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	11.54	PVC	12"
INLET PIPE 2			
OUTLET PIPE 1	11.04	DI	12"
NOTES/SPECIAL REQUIREMENTS:			

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			SDCB-MAX-4
WATER QUALITY FLOW RATE (cfs[L/s])			0.0128
PEAK FLOW RATE (cfs[L/s])			0.08
RETURN PERIOD OF PEAK FLOW (yrs)			100
CARTRIDGE SIZE, (27,18)			18
CARTRIDGE FLOW RATE			
MEDIA TYPE (PERLITE, ZPG, PSORB)			ZPG
NUMBER OF CARTRIDGES REQUIRED			1
RIM ELEVATION			16.71
PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE 1	14.15	DI	10"
NOTES/SPECIAL REQUIREMENTS:			

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			SDCB-MAX-6
WATER QUALITY FLOW RATE (cfs[L/s])			0.0161
PEAK FLOW RATE (cfs[L/s])			0.14
RETURN PERIOD OF PEAK FLOW (yrs)			100
CARTRIDGE SIZE, (27,18)			18
CARTRIDGE FLOW RATE			
MEDIA TYPE (PERLITE, ZPG, PSORB)			ZPG
NUMBER OF CARTRIDGES REQUIRED			1
RIM ELEVATION			16.50
PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE 1	14.16	DI	10"
NOTES/SPECIAL REQUIREMENTS:			

NOTE: THIS DETAIL APPLIES TO SDCB-MAX-2, SDCB-MAX-4, AND SDCB-MAX-6

1 / – CONTECH CONCRETE CATCHBASIN STORMFILTER
SCALE: NTS

C:\BMS\KJCE-PWD0130409\1028402-WO.27 (ROAD FRONTAGE STORMWATER DETAILS 03).DWG

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 05/30/25	SCALE AS NOTED
DESIGNED S.MAURYA	CHECKED L.WEIDEN
SENIOR PM B.FUENTES	PROJECT NAME
DRAWING NAME WO.27	

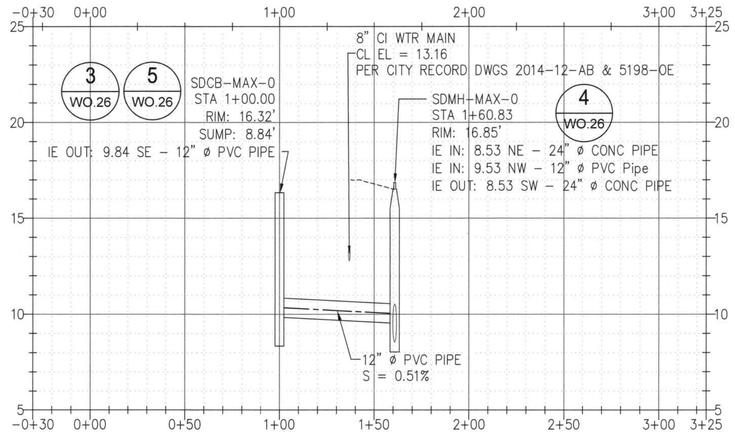
BENJAMIN EDWARD FUENTES · STATE OF WASHINGTON · 48439 · REGISTERED PROFESSIONAL ENGINEER · 05.30.25

SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

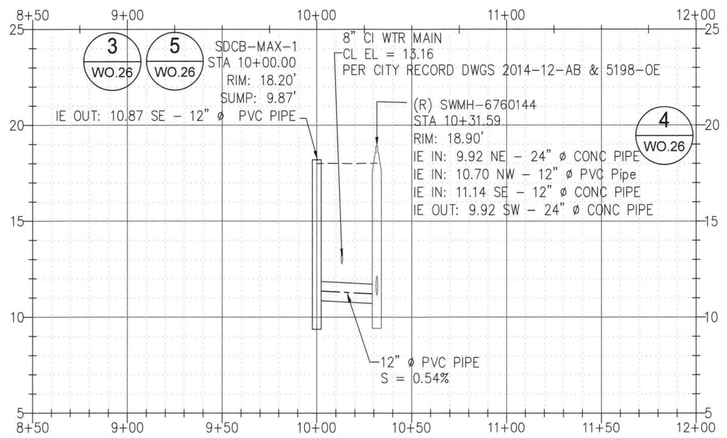
THORNE ROAD
OFF DOCK CONTAINER YARD
ROAD FRONTAGE STORMWATER DETAILS 03

WO23-0096
WO.27
SHEET NO.



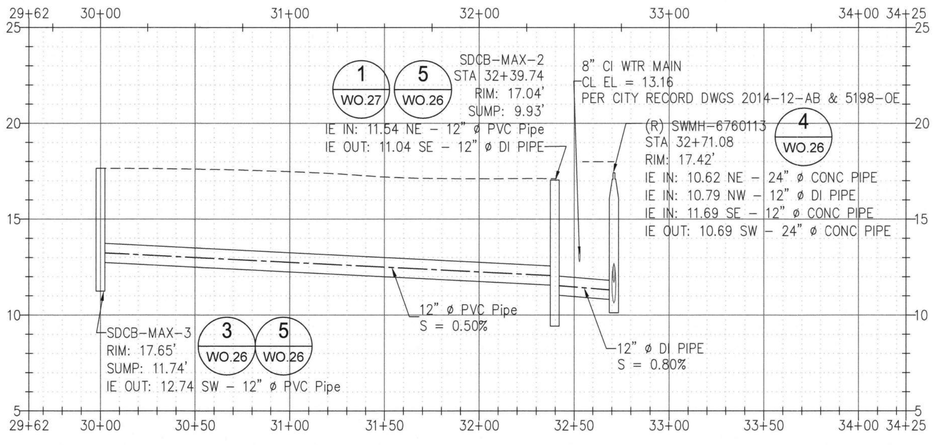
1 - SDCB MAX-0 TO SDMH-MAX-0

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 - SDCB MAX-1 TO (R) SWMH-6760144

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



3 - SDCB MAX-3 TO (R) SWMH-6760113

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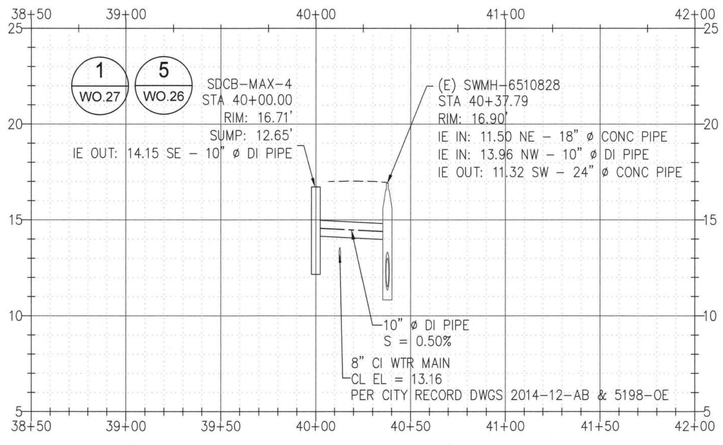
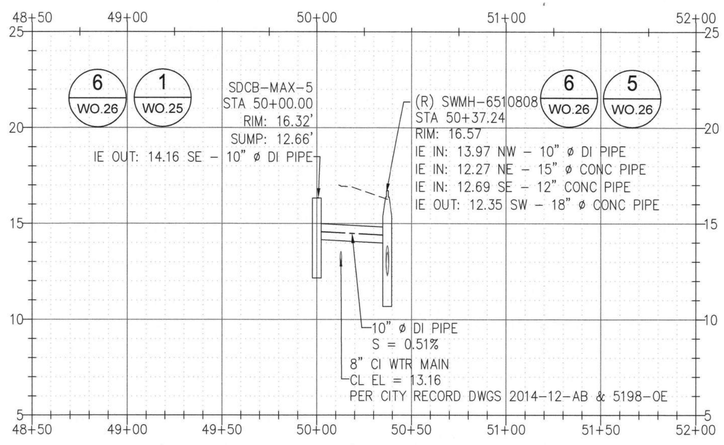


4 - SDCB MAX-4 TO (E) SWMH-6510828

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



5 - SDCB MAX-5 TO (R) SWMH-6510808

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE: 05/30/25 | SCALE: AS NOTED
DESIGNED: S.MAURYA | CHECKED: L.TEJERA
SENIOR PM: B.FUENTES | PROJECT NAME
DRAWING NAME: WO.28

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 48439 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
THORNE ROAD STORMWATER LATERAL PROFILE 01

WO23-0096
WO.28
SHEET NO.
SHEET 28 OF 46

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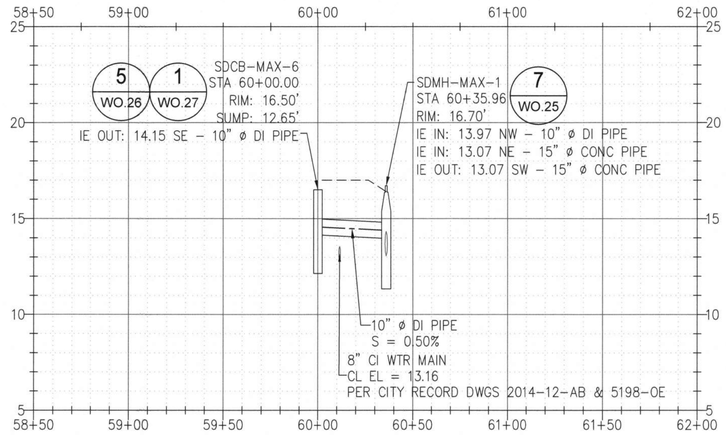
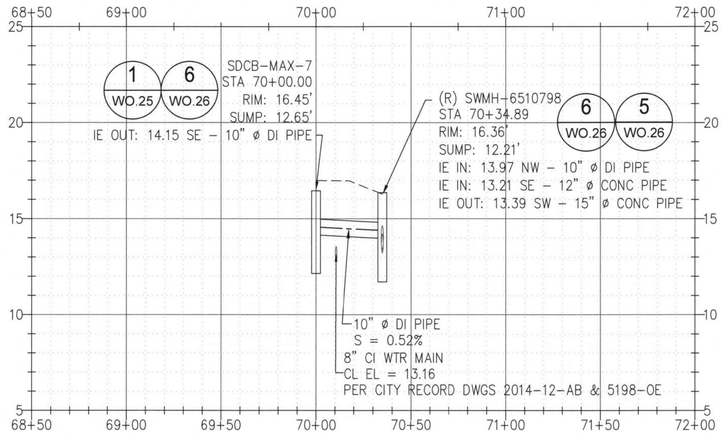


1 - SDCB MAX-6 TO SDMH-MAX-1

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)



2 - SDCB MAX-7 TO (R) SWMH-6510798

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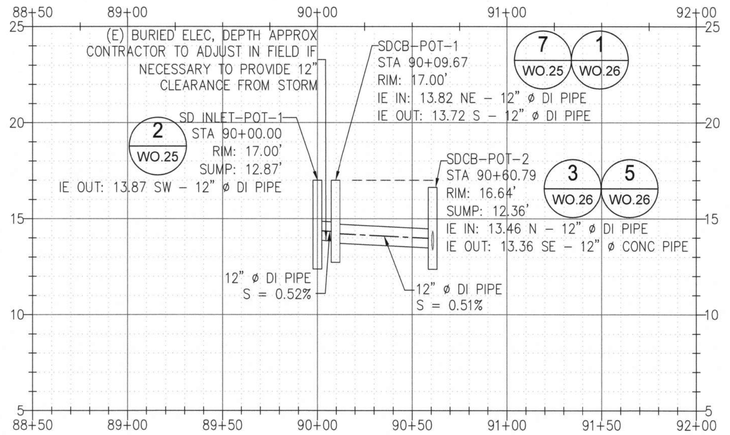

3 - SD INLET-POT-1 TO SCDB-POT-2

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

4 - SD INLET-POT-2 TO (E) SWMH-106707

SCALE: 1"=40' (HORIZ.) 1"=4' (VERT.)

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 05/30/25	SCALE AS NOTED
DESIGNED S.MAURYA	CHECKED L.TEJERA
SENIOR PM B.FUENTES	PROJECT NAME
DRAWING NAME WO.29	

BENJAMIN EDWARD FUENTES — STATE OF WASHINGTON — 49429 — REGISTERED PROFESSIONAL ENGINEER — 05.30.25

SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
THORNE ROAD STORMWATER LATERAL PROFILE 02

WO23-0096
WO.29
SHEET NO. 29 OF 46

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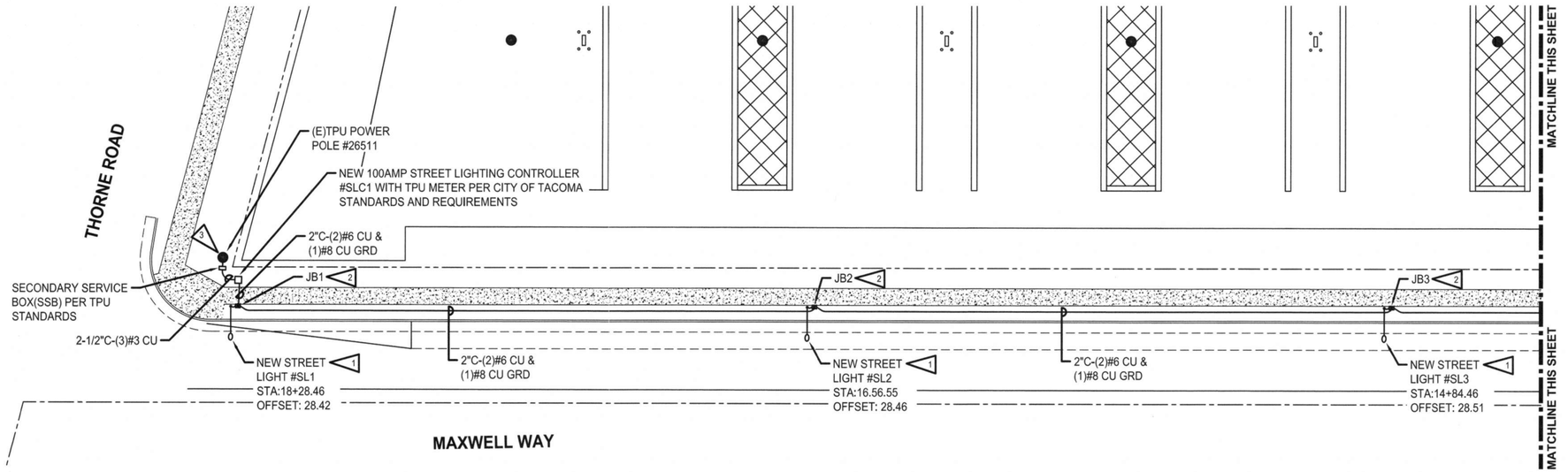
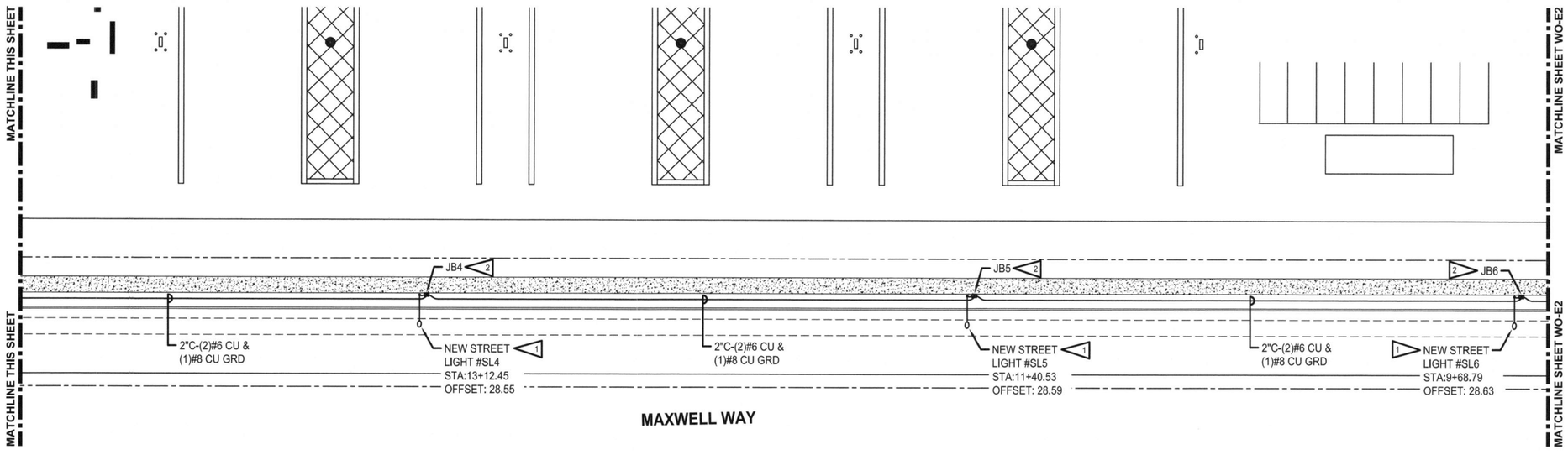
Plotted By: Scott Kelly 12/6/2024 11:55 AM



PARTIAL ELECTRICAL STREET LIGHTING PLAN
SCALE: 1"=20'-0"



PARTIAL ELECTRICAL STREET LIGHTING PLAN
SCALE: 1"=20'-0"

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF TACOMA STANDARDS AND SPECIFICATIONS.
2. THE LOCATION FEATURES SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION START.
3. UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ILLUMINATION WORK.
4. CONDUIT LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.
5. THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES AND CABINETS SHOWN ON THIS PLAN MAY BE ADJUSTED IN THE FIELD TO AVOID CONFLICTS AND MEET ADA REQUIREMENTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO CONSTRUCTION.
6. ALL JUNCTION BOXES LOCATED IN LANDSCAPE AREAS SHALL HAVE CONCRETE COLLAR PER CITY OF TACOMA STANDARD PLAN TS-08.
7. THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 24 MONTHS FROM THE DATE OF CITY APPROVAL. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONS, DELETIONS, OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMIT OR IF FIELD CONDITIONS ARE DIFFERENT FROM WHAT IS DEPICTED ON PLANS.
8. ALL CONDUIT SHALL BE BELOW GRADE, PVC SCHEDULE 80, UNLESS NOTED OTHERWISE.
9. STREETLIGHT SYSTEM WILL BE TURNED OVER TO THE CITY FOR OPERATIONS AND MAINTENANCE ONCE INSTALLATION IS INSPECTED, OPERATIONAL, AND APPROVED BY THE CITY.

ELECTRICAL NOTES:

1. CONTRACTOR SHALL PROVIDE 40'-0", STEEL, ROUND, TAPERED POLE WITH 8'-0" LIGHT FIXTURE MAST ARM. LEOTEK #GCM1-60J-MV-40K-2R-GY-090-PCR7 LIGHT FIXTURE, POLE AND FIXED CONCRETE BASE PER CITY OF TACOMA STANDARDS AND REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE WSDOT, TYPE 1, STANDARD DUTY RATED HANDHOLE WITH LOCKING LID. PROVIDE SLIP RESISTANT COATING WHEN INSTALLED WITH PEDESTRIAN WALKWAY.
3. CONTRACTOR SHALL PROVIDE NEW CONDUIT RISER ON EXISTING TACOMA POWER UTILITY POLE #26511 PER TACOMA POWER C-UG-1200 AND C-SV-3200 STANDARDS.

PROJECT NORTH
TRUE NORTH

NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

20' 0' 20' 40
SCALE: 1"=20'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

CROSS ENGINEERS, INC
923 MLK Jr. Way
Tacoma, WA 98405
Phone: (253) 759-0118
Job Number: 22-128
info@crossengineers.com

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE	SCALE
12/6/2024	AS NOTED
DESIGNED	CHECKED
SJK	SLH
SENIOR PM	PROJECT NAME
GLW	
DRAWING NAME	

STEVEN L. HUBBS — STATE OF WASHINGTON — 0029000 — REGISTERED PROFESSIONAL ENGINEER
12/6/24
SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
THORNE ROAD
OFF DOCK CONTAINER YARD
PARTIAL ELECTRICAL STREET LIGHTING PLAN

WO23-0096
WO-E1
SHEET NO. 30 OF 46 SHEET

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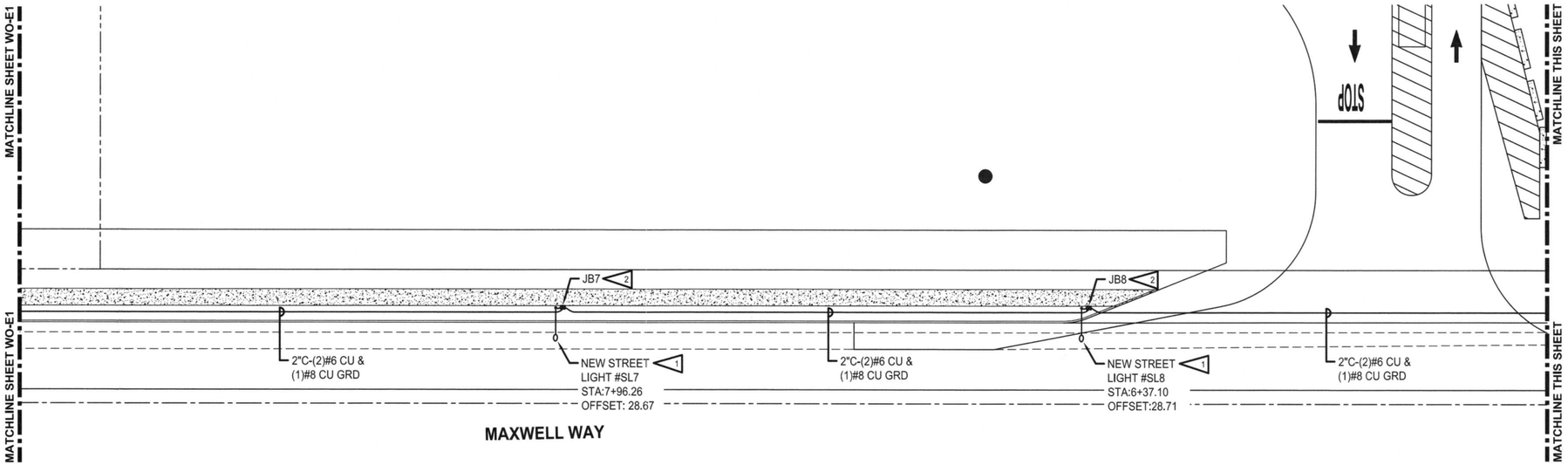
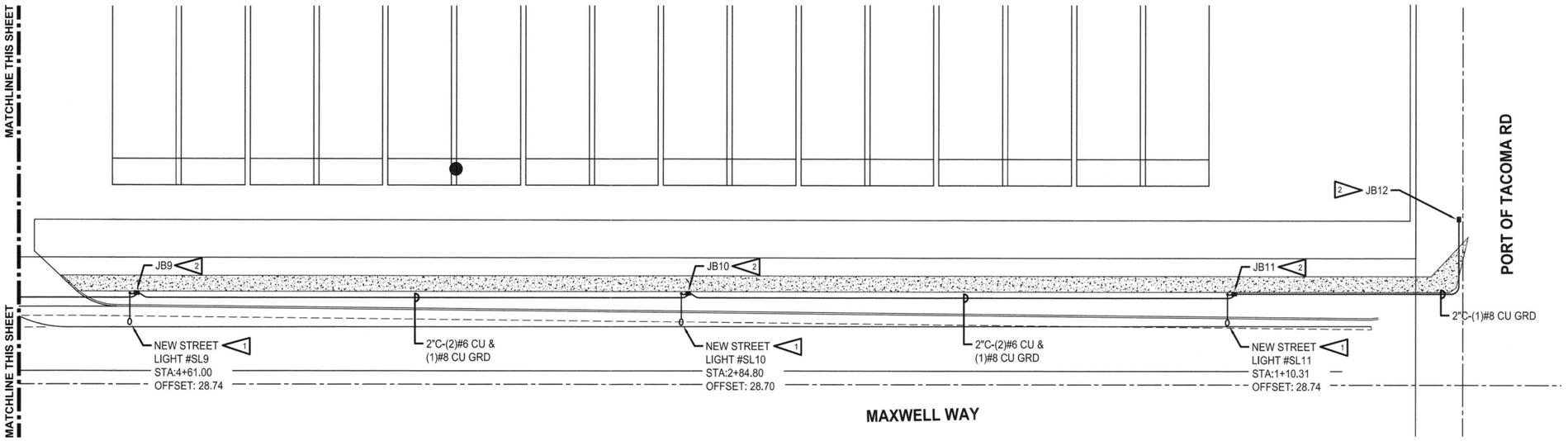
Plotted By: Scott Kelly 12/6/2024 11:55 AM



PARTIAL ELECTRICAL STREET LIGHTING PLAN
SCALE: 1"=20'-0"



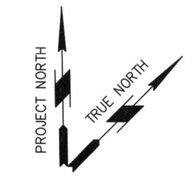
PARTIAL ELECTRICAL STREET LIGHTING PLAN
SCALE: 1"=20'-0"

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF TACOMA STANDARDS AND SPECIFICATIONS.
2. THE LOCATION FEATURES SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION START.
3. UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ILLUMINATION WORK.
4. CONDUIT LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.
5. THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES AND CABINETS SHOWN ON THIS PLAN MAY BE ADJUSTED IN THE FIELD TO AVOID CONFLICTS AND MEET ADA REQUIREMENTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO CONSTRUCTION.
6. ALL JUNCTION BOXES LOCATED IN LANDSCAPE AREAS SHALL HAVE CONCRETE COLLAR PER CITY OF TACOMA STANDARD PLAN TS-08.
7. THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 24 MONTHS FROM THE DATE OF CITY APPROVAL. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONS, DELETIONS, OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMIT OR IF FIELD CONDITIONS ARE DIFFERENT FROM WHAT IS DEPICTED ON PLANS.
8. ALL CONDUIT SHALL BE BELOW GRADE, PVC SCHEDULE 80, UNLESS NOTED OTHERWISE.
9. STREETLIGHT SYSTEM WILL BE TURNED OVER TO THE CITY FOR OPERATIONS AND MAINTENANCE ONCE INSTALLATION IS INSPECTED, OPERATIONAL, AND APPROVED BY THE CITY.

ELECTRICAL NOTES:

1. CONTRACTOR SHALL PROVIDE 40'-0", STEEL, ROUND, TAPERED POLE WITH 8'-0" LIGHT FIXTURE MAST ARM. LEOTEK #GCM1-60J-MV-40K-2R-GY-090-PCR7 LIGHT FIXTURE, POLE AND FIXED CONCRETE BASE PER CITY OF TACOMA STANDARDS AND REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE WSDOT, TYPE 1, STANDARD DUTY RATED HANDHOLE WITH LOCKING LID. PROVIDE SLIP RESISTANT COATING WHEN INSTALLED WITH PEDESTRIAN WALKWAY.



NOTE: IF DRAWING IS LESS THEN 22"x34", IT IS A REDUCED SET

20' 0' 20' 40

SCALE: 1"=20'

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

CROSS ENGINEERS, INC
923 MLK Jr. Way
Tacoma, WA 98405
Phone: (253) 759-0118
Job Number: 22-128
info@crossengineers.com

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 12/6/2024 | SCALE AS NOTED
DESIGNED SJK | CHECKED SLH
SENIOR PM GLW | PROJECT NAME
DRAWING NAME

STEVEN L. HUBBS STATE OF WASHINGTON 23955 REGISTERED PROFESSIONAL ENGINEER
12/6/24

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
PARTIAL ELECTRICAL STREET LIGHTING PLAN

WO23-0096
WO-E2
SHEET NO. 31 OF 46
SHEET

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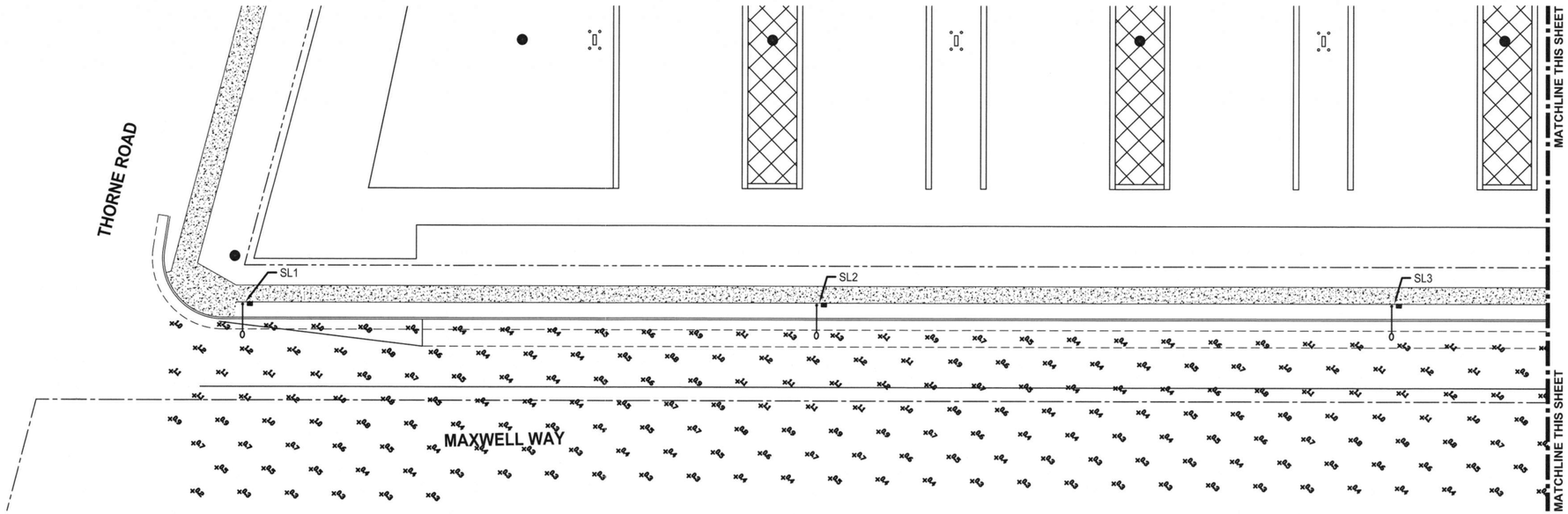
Plotted By: Scott Kelly 12/6/2024 11:56 AM



PARTIAL STREET LIGHTING PHOTOMETRIC PLAN
SCALE: 1"=20'-0"

PHOTOMETRIC LIGHTING SUMMARY:

MAXWELL WAY

AVERAGE FOOTCANDLES = 0.6 FC

MAXIMUM FOOTCANDLES = 1.3 FC

MINIMUM FOOTCANDLES = 0.2 FC

MAX:MIN. = 6.5:1

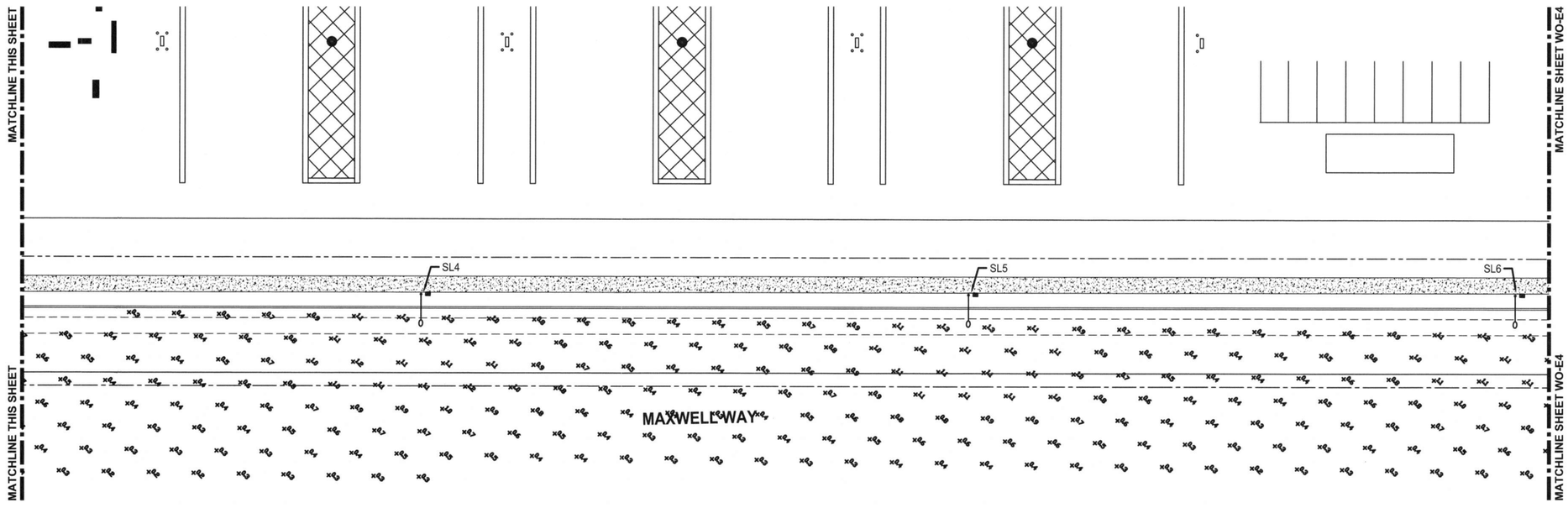
AVG.:MIN. = 3.0:1

LIGHT FIXTURE NOTES:

NEW STREET LIGHTS TO BE PROVIDED AS FOLLOWS:

STREET LIGHT SL#1 THRU #SL11

- 60 WATT, 4000K, LED - MANUFACTURED BY LEOTEK
- 40' METAL LIGHT POLE - 8' MAST ARM
- TYPE II LIGHT DISTRIBUTION



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SCALE: 1"=20'-0"

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12/6/24
SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
PARTIAL STREET LIGHTING PHOTOMETRIC PLAN

WO23-0096
WO-E3
SHEET NO. 32 OF 46
SHEET

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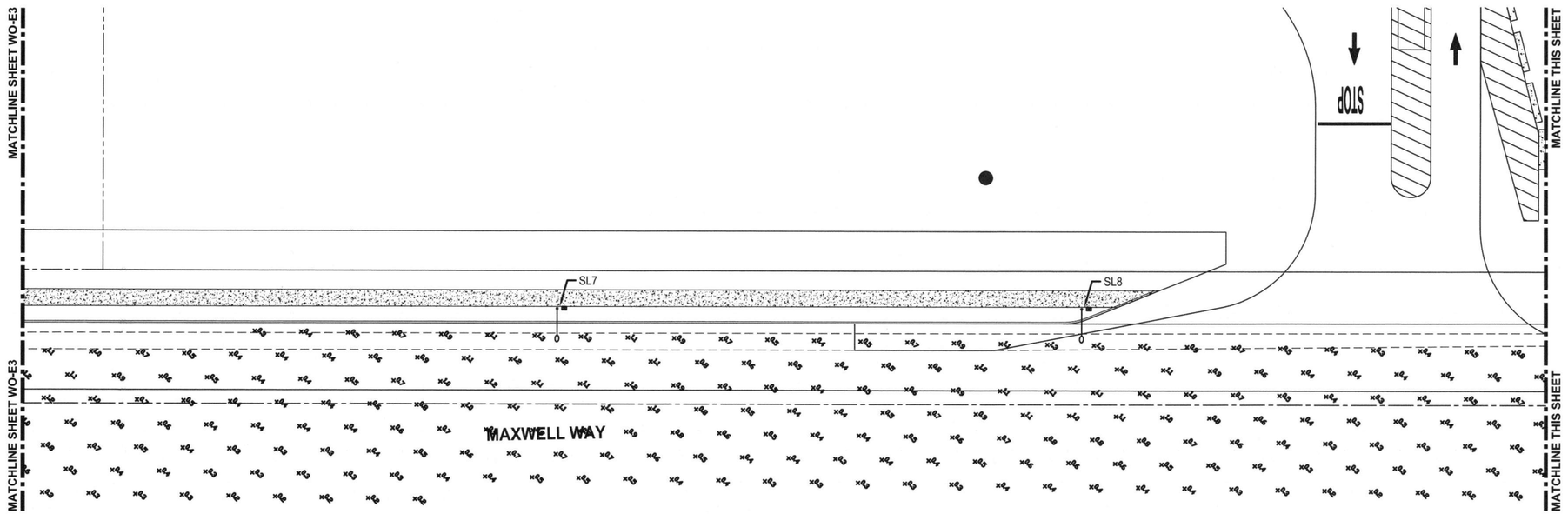
Plotted By: Scott Kelly 12/6/2024 11:56 AM



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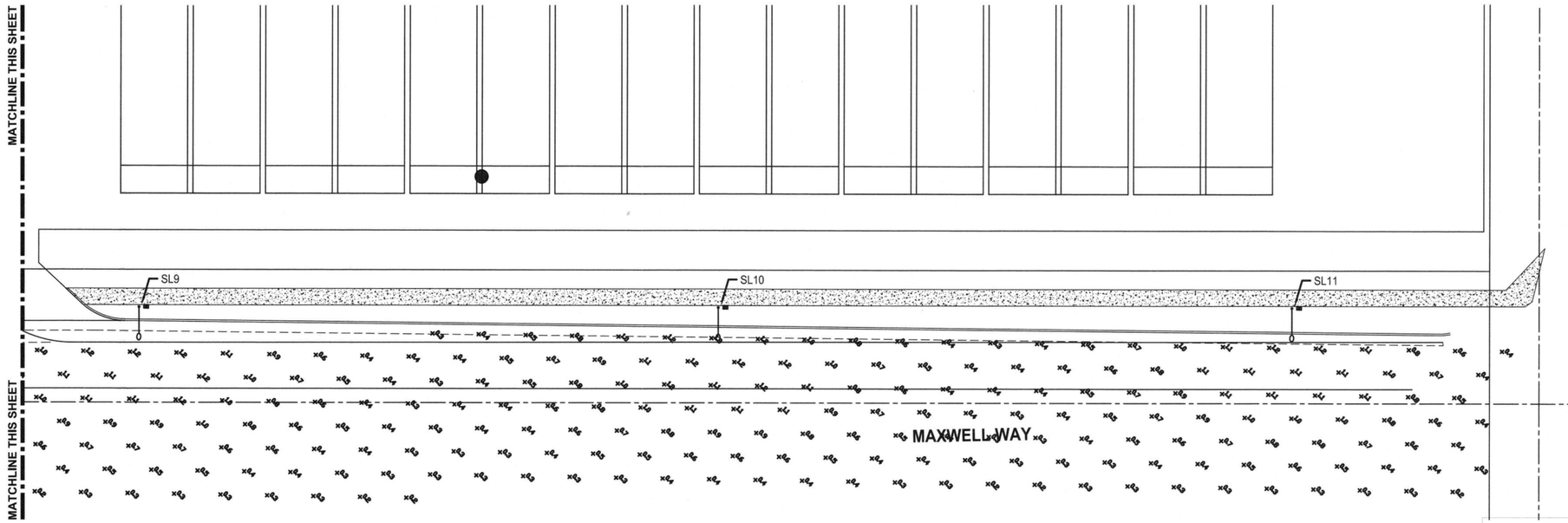

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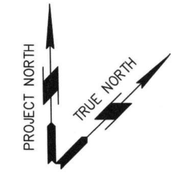
SCALE: 1"=20'-0"



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BY
DATE
FIELD BOOKS

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DESIGNED SJK | CHECKED SLH
SENIOR PM GLW | PROJECT NAME
DRAWING NAME

STEVEN L. HUGGS — STATE OF WASHINGTON — 22128 — REGISTERED PROFESSIONAL ENGINEER
12/6/24

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
PARTIAL STREET LIGHTING PHOTOMETRIC PLAN

WO23-0096
WO-E4
SHEET NO. 33 OF 46
SHEET

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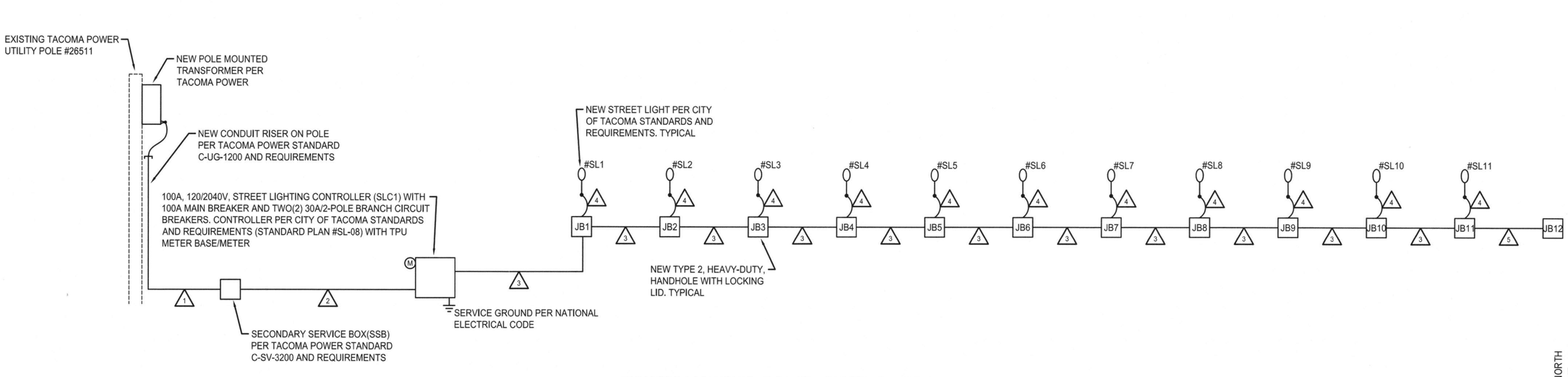
Plotted By: Scott Kelly 12/6/2024 11:56 AM

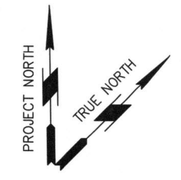
CONDUIT AND WIRE SCHEDULE

1. 2"C.O. CONDUCTORS BY TACOMA POWER
2. 2-1/2"C-(3)#3 CU
3. 2"C-(2)#6 CU & (1)#8 CU GRD
4. 2"C-(2)#10 CU & (1)#10 CU GRD
5. 2"C-(1)#8 CU GRD



STREET LIGHTING POWER RISER DIAGRAM

NOT TO SCALE



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	SENIOR PM GLW	PROJECT NAME	
	DRAWING NAME		

STEVEN L HUBBS — STATE OF WASHINGTON — 20030 — REGISTERED PROFESSIONAL ENGINEER — 12/6/24

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
STREET LIGHTING POWER RISER DIAGRAM

WO23-0096
WO-E5
SHEET NO. 34 OF 46
SHEET

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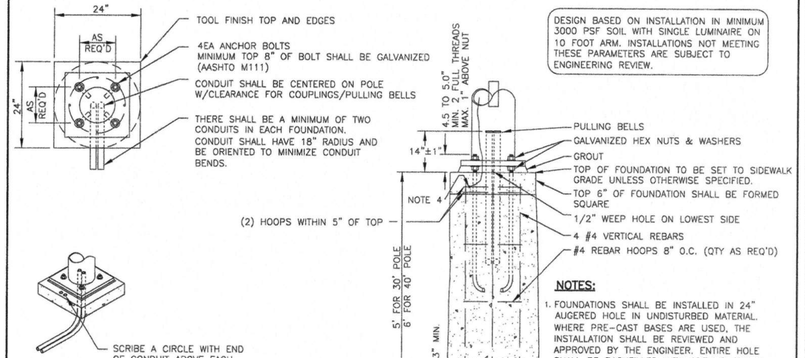
Plotted By: Scott Kelly 12/6/2024 11:56 AM

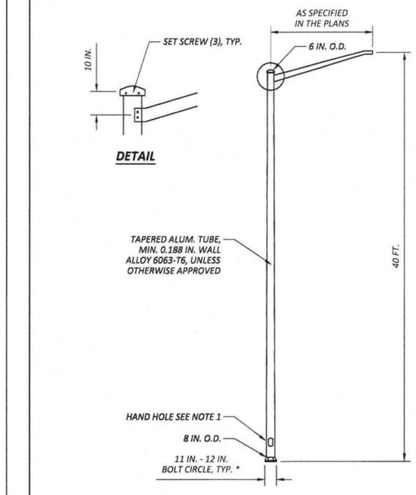


DESIGN BASED ON INSTALLATION IN MINIMUM 3000 PSF SOIL WITH SINGLE LUMINAIRE ON 10 FOOT ARM. INSTALLATIONS NOT MEETING THESE PARAMETERS ARE SUBJECT TO ENGINEERING REVIEW.

NOTES:

1. FOUNDATIONS SHALL BE INSTALLED IN 24" AUGERED HOLE IN UNDISTURBED MATERIAL. WHERE PRE-CAST BASES ARE USED, THE INSTALLATION SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. ENTIRE HOLE SHALL BE BACKFILLED WITH CDF OR OTHER COMPACTIBLE MATERIAL APPROVED BY THE ENGINEER.
2. CALL FOR UTILITY LOCATION BEFORE DIGGING (1-800-424-5555)
3. ALL STEEL TO HAVE 3" MINIMUM CONCRETE COVER. HOOPS SHALL HAVE 135° HOOKS. ANCHOR BOLTS MAY BE SECURED TO HOOPS.
4. BOND CAGE TO GROUND LUG.

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION — CITY ENGINEER — DATE 2/4/03 (3/19/03)	STREETLIGHT FOUNDATION 30' & 40' — STANDARD PLAN NO. SL-02



STREET LIGHTING SPECIFICATIONS

40-FOOT ALUMINUM LIGHT STANDARD

1) ***DIMENSIONS***

LIGHT STANDARDS SHALL PROVIDE A FIXTURE MOUNTING HEIGHT OF 40 FEET PLUS OR MINUS 6 INCHES, WITH A MAST ARM AS SPECIFIED IN THE PLAN.

HAND HOLE (WITH GROUND LUG AND REMOVABLE COVER) CENTER SHALL BE LOCATED APPROXIMATELY 18 INCHES FROM THE BASE PLATE, ROTATED CLOCKWISE 90 DEGREES FROM MAST ARM.

2) ***STRENGTH***

STANDARDS SHALL MEET ALL STRENGTH REQUIREMENTS OF THE CURRENT EDITION OF AASHTO FOR 115 MPH ISO TACH WHEN USED WITH A LUMINAIRE WEIGHING 48 POUNDS WITH E.P.A. OF 1.1 SQUARE FEET.

3) ***FINISH***

THE STANDARDS AND LUMINAIRE ARMS SHALL BE MADE OF SPUN ALUMINUM, SATIN GROUND FINISH.

4) *ALL ATTACHING BOLTS AND SCREWS THAT ARE NOT GALVANIZED SHALL BE STAINLESS STEEL. BOLTS THAT ATTACH THE BRACKET ARM TO THE POLE SHALL BE A MINIMUM OF 1.5 IN. LONG.*

5) *POLE (TOP) CAP SHALL BE FITTED ABOVE MAST ARM ATTACHMENT AND SHALL EXTEND OVER THE OUTSIDE DIAMETER OF THE POLE WITH A WATER RESISTANT FIT.*

* *CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF BOLT PATTERN PRIOR TO FOUNDATION CONSTRUCTION*

(NOT TO SCALE)

Pierce County — Planning & Public Works — Office of the County Engineer	APPROVED BY: COUNTY ENGINEER — 10/17/2022 DATE	ALUMINUM LIGHT STANDARD — STANDARD DRAWING PC.J1.5

NOTE: PIERCE COUNTY STANDARD FOR 40'-0" ALUMINUM UTILIZED DUE TO CITY OF TACOMA STANDARDS ONLY SHOWING WOOD POLE DETAIL.

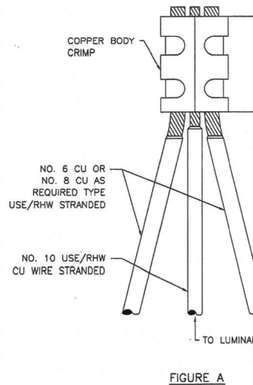


FIGURE A

STREETLIGHTING TAP
FOR USE IN BASE OF STANDARDS

TAPING INSTRUCTIONS

1. MAKE SPLICE AS SHOWN IN FIGURE A
2. APPLY TAPE AS SHOWN IN FIGURE A. APPLY TAPE AND "SCOTHKOTE" MOISTURE RESISTANT ELECTRICAL COATING OVER ENTIRE SPLICE AREA.
3. ATTACH CABLE TIE A MINIMUM OF 2" FROM THE PRESSURE CONNECTOR AS SHOWN IN FIGURE B.
4. APPLY SECOND COAT OF VARNISH.

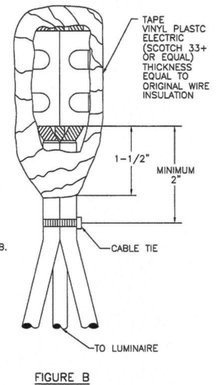
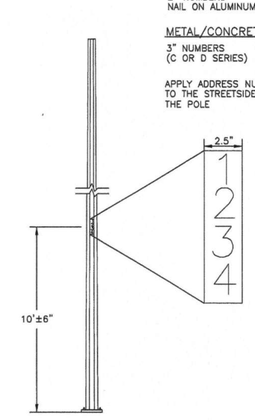


FIGURE B

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION — CITY ENGINEER — DATE 2/4/03 (2/11/03)	STREETLIGHT SPLICE FOR HANDHOLES — STANDARD PLAN NO. SL-05



WOOD POLES:
2" NUMBERS
NAIL ON ALUMINUM NUMBERS

METAL/CONCRETE/FIBERGLASS POLES
3" NUMBERS
(C OR D SERIES)

APPLY ADDRESS NUMBERS TO THE STREETSIDE OF THE POLE

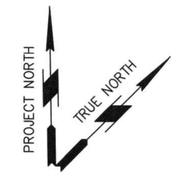
COLORS:

CONCRETE POLES:
BACKGROUND: LIGHT BEIGE
FOREGROUND: DARK BROWN

UNPAINTED ALUMINUM OR GALVANIZED POLES:
BACKGROUND: NONE
FOREGROUND: BLACK

IF THERE ARE EXISTING NUMBERS ON POLE PAINT OVER OR REMOVE OLD NUMBERS

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION — CITY ENGINEER — DATE 2/4/03 (2/11/03)	STREETLIGHT POLE ADDRESSES TYPICAL DETAIL — STANDARD PLAN NO. SL-06



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FIELD BOOKS	DRAWING NAME	

STEVEN L. HUBBS — STATE OF WASHINGTON — 20030 — REGISTERED PROFESSIONAL ENGINEER — 12/6/24

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
STREET LIGHTING DETAILS

WO23-0096
WO-E6
SHEET NO. 35 OF 46
SHEET

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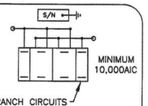
Plotted By: Scott Kelly 12/6/2024 12:02 PM



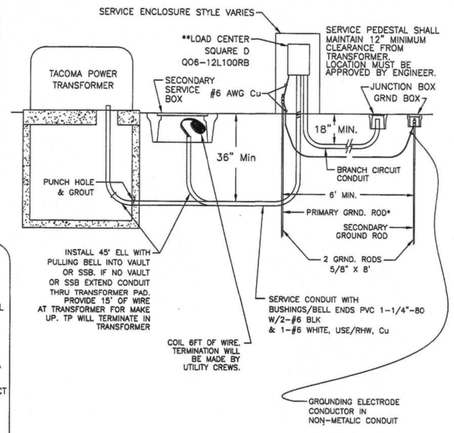
WHEN SERVING FROM TRANSFORMERS LARGER THAN 50 KVA AN EVALUATION OF INTERRUPT CAPACITY OF THE SERVICE EQUIPMENT IS REQUIRED.

PANEL LAYOUT

N.T.S.

SIZE OF BRANCH CIRCUIT CONDUCTOR	MAXIMUM BREAKER SIZE *
#8 AWG COPPER	30AMP
#6 AWG COPPER	40AMP

* SIZE BASED ON ENSURING BREAKER WILL TRIP ON FAULTS AT END OF LONG CIRCUITS.



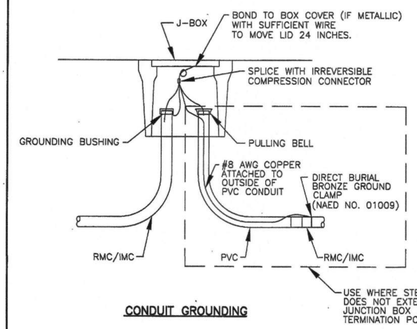
PROCEDURE:

1. OBTAIN ELECTRICAL PERMIT FROM TACOMA POWER FOR EACH ELECTRICAL SERVICE.
2. COMPLETE SERVICE PANEL INSTALLATION EXEPT FOR ENTERING TRANSFORMER VAULT OR PAD. FOR SSB INSTALLATIONS, INSTALL CONDUIT AND WIRE INTO SSB.
3. PREFERRED PRACTICE IS TO OBTAIN SERVICE FROM SSB. CONTACT TACOMA POWER BEFORE SERVICING STREETLIGHTS FROM TRANSFORMER.
4. ARRANGE FOR ELECTRICAL INSPECTION AND CUT-IN BY TACOMA POWER (502-8277).
5. AFTER TACOMA POWER ACCEPTANCE OF SERVICE PANEL CONTACT THE UNDERGROUND RESIDENTIAL DISTRIBUTION (URD) OFFICE (502-8232) TO ARRANGE FOR CONDUIT AND CONDUCTOR ENTERANCE INTO TRANSFORMERS.

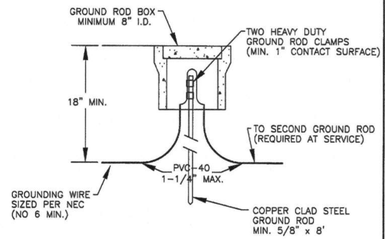
*6. PRIMARY GROUND ROD MAY BE LOCATED OUTSIDE OF SERVICE ENCLOSURE IN GROUND ROD BOX.

**7. DO NOT PENETRATE OUTER WALL OF ENCLOSURE WHEN MOUNTING EQUIPMENT HARDWARE.

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	STREETLIGHT SERVICE DETAIL UNDERGROUND TYPE A
	CITY ENGINEER — DATE 2/4/03	STANDARD PLAN NO. SL-08



CONDUIT GROUNDING



GROUND ROD INSTALLATION

NOTES:

1. ALL STREETLIGHT CONDUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR.
2. METALLIC CONDUIT SHALL BE BONDED AT BOTH ENDS TO THE EQUIPMENT GROUNDING CONDUCTOR.
3. EQUIPMENT GROUNDING CONDUCTORS SHALL BE STRANDED INSULATED COPPER.

CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION	STREETLIGHT GROUNDING DETAIL
	CITY ENGINEER — DATE 2/4/03	STANDARD PLAN NO. SL-10

CROSS ENGINEERS, INC
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SENIOR PM GLW | PROJECT NAME
DRAWING NAME

STEVEN L. HUBBS — STATE OF WASHINGTON — 20800 — REGISTERED PROFESSIONAL ENGINEER
12/6/24
SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
STREET LIGHTING DETAILS

WO23-0096
WO-E7
SHEET NO. 36 OF 46
SHEET

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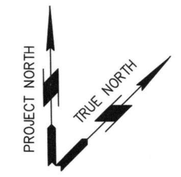

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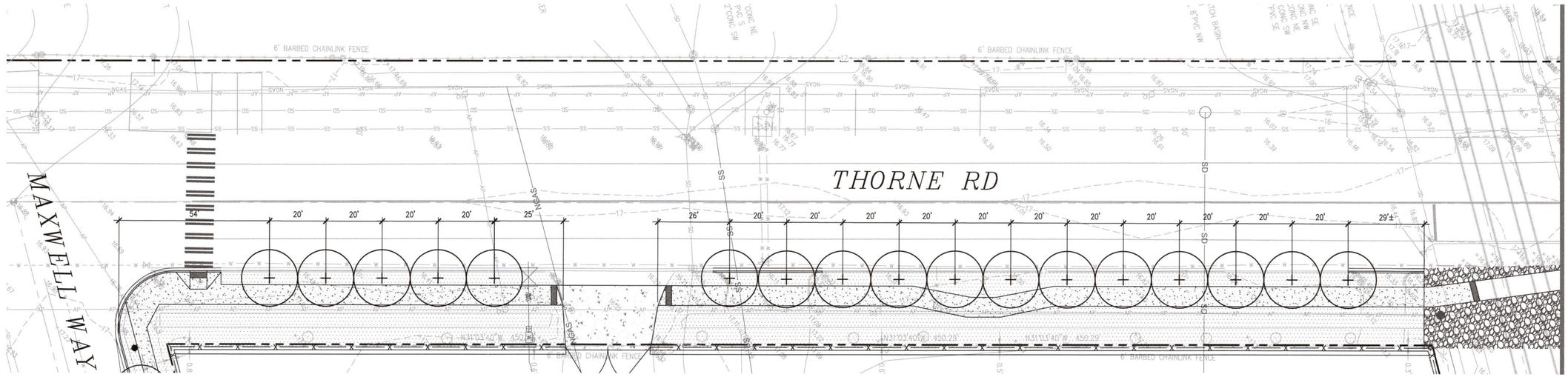
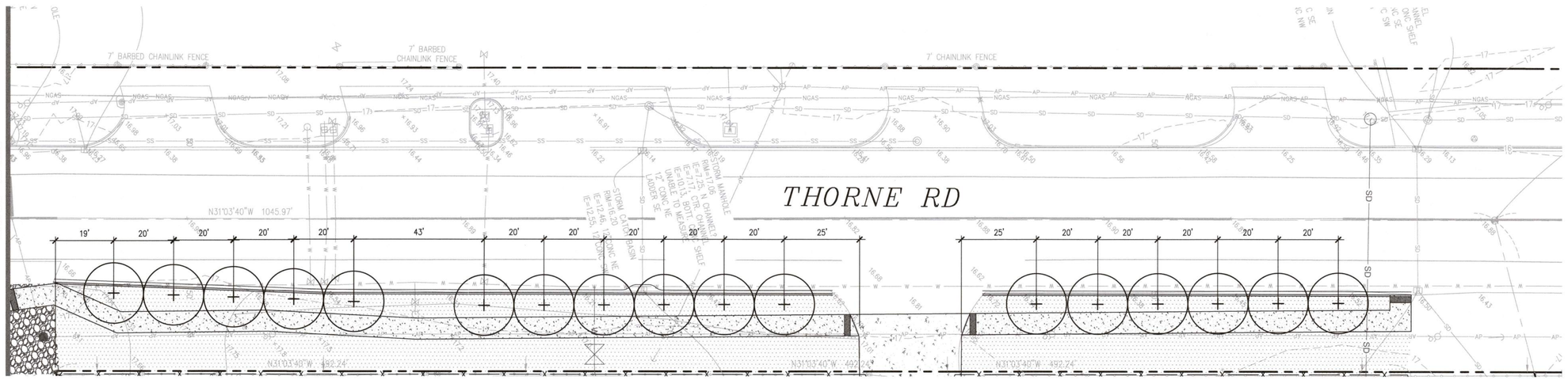
Plotted By: Stephen Jackson 2/2/2024 1:46 PM





NORTH

HORIZONTAL SCALE: 1"=20'

20 0 20 40

GENERAL NOTES

1. SEE WO-L4 AND WO-L5 FOR PLANT SCHEDULE, NOTES AND DETAILS.
2. TREE SPACING TO CONFORM TO CITY OF TACOMA STREET TREE CLEARANCE STANDARD PLAN NO. LS-02, SEE 02/WO-L5.
3. NO STRUCTURES, RETAINING WALLS, FENCES, TREES ARE PERMITTED WITHIN 5 FEET OF WATER FACILITIES. LIGHT LANDSCAPING WITH GRASS AND/OR SMALL SHRUBBERY IS PERMITTED.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

sitts&hill
CIVIL | STRUCTURAL | ARCHITECTURAL | SURVEY
4815 CENTER STREET | TACOMA, WA. 98409
PHONE: (253) 474-9449 | FAX: (253) 474-0153
http://www.sittshill.com/

Project No.:	20,011	Project Mgr.:	R.J.J.
Proj. Engineer:	R.J.J.	Proj. Drafter:	K.L.K.

Tacoma

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 02/05/2024 | SCALE AS NOTED
DESIGNED RJJ | CHECKED RJJ
SENIOR PM RJJ | PROJECT NAME
DRAWING NAME

STATE OF WASHINGTON RAYMOND J. JOHNSON No. 449 REGISTERED LANDSCAPE ARCHITECT 02/05/24

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
LANDSCAPE PLAN - SHEET 1

WO23-0096
WO-L1
SHEET NO. 37 OF 46
SHEET

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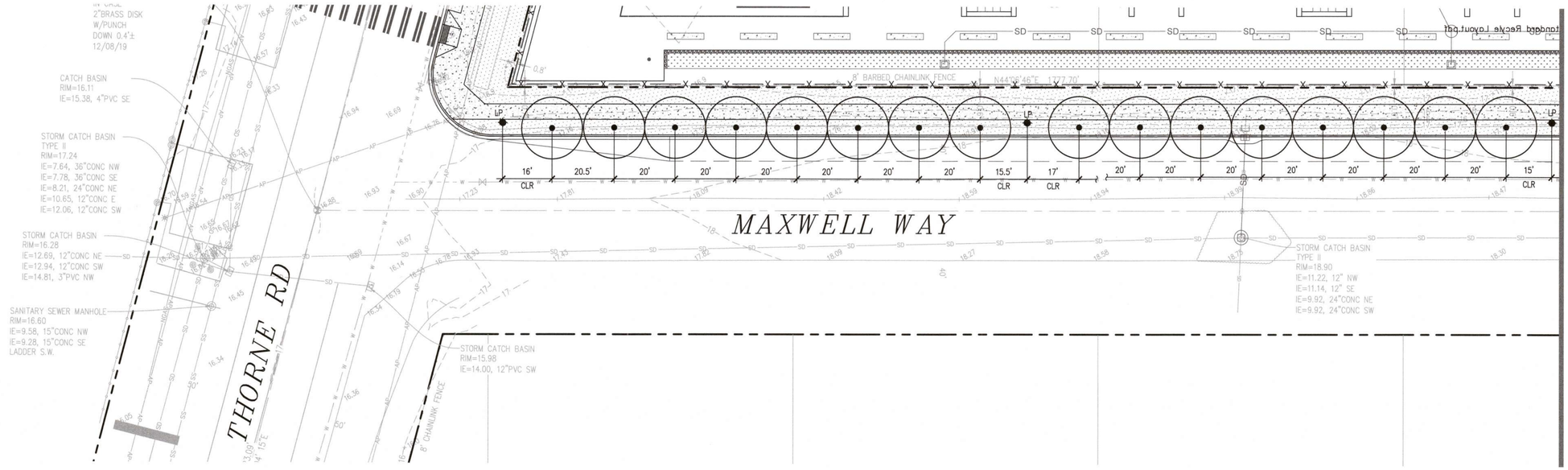

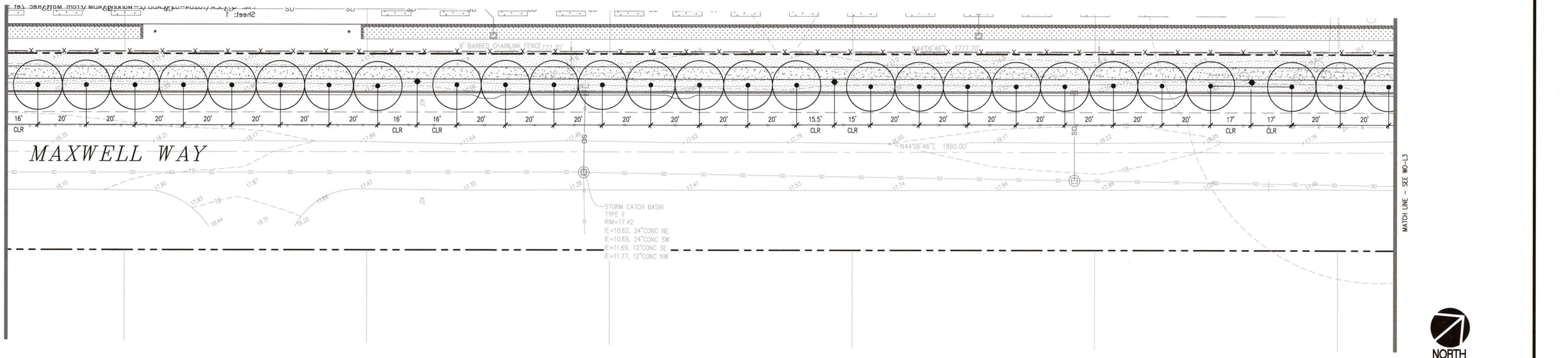

LEGEND

LP – LIGHT POLE

NORTH

HORIZONTAL SCALE: 1"=20'

20 0 20 40

GENERAL NOTES

1. SEE WO-L4 AND WO-L5 FOR PLANT SCHEDULE, NOTES AND DETAILS.
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ISSUED FOR CONSTRUCTION
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NO	REVISION	DATE	APPD

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BY
DATE
FIELD BOOKS

DATE 02/05/2024 | SCALE AS NOTED
DESIGNED RJJ | CHECKED RJJ
SENIOR PM RJJ | PROJECT NAME
DRAWING NAME

STATE OF WASHINGTON RAYMOND J. JOHNSON 21449 REGISTERED LANDSCAPE ARCHITECT 02/05/24

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
LANDSCAPE PLAN - SHEET 2

WO23-0096
WO-L2
SHEET NO.
SHEET 38 OF 46

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Plotted By: Stephen Jackson 2/2/2024 1:46 PM

MATCH LINE – SEE WO-L2

MAXWELL WAY

8' BARBED CHAINLINK FENCE N46°E 1777.70'

20' 20' 20' 20' 20' 16' CLR 15' CLR 20' 20' 20' 20' 20' 20' 25'± CLR

LP LP

SD SD

STORM CATCH BASIN
TYPE II
RIM=16.90
IE=11.50, 18"CONC NE
IE=11.32, 24"CONC SW

STORM CATCH BASIN
TYPE II
RIM=16.57
IE=12.47, 12"CONC NW
IE=12.27, 18"CONC NE
IE=12.69, 12"CONC SE
IE=12.35, 18"CONC SW

MATCH LINE – SEE BELOW

PORT OF TACOMA RD

S45°54'00"E 1011.16'

20'± 20'± 20'± 20'± 20'± 20'± 21'±

CATCH BASIN
63

S45°54'00"E 147.70'

LEGEND

LP – LIGHT POLE

YLP9

LP10

STORM CATCH BASIN
RIM=16.64
IE=13.36, 12"CONC SE
IE=[illegible] CONC NW

IE=5.34, 18"CONC NW
IE=5.19, 18"CONC SE
IE=5.76, 8"CONC SW
LADDER SE

8" BARBED CHAINLINK FENCE

N44°16'16"E 1777.70'

16' CLR 20' 20' 20' 20' 20' 20' 20' 20' 20' 19' CLR 20' 20' 20' 20' 20' 20' 20' 16' CLR 16' CLR 20' 25'±

MAXWELL WAY

MATCH LINE – SEE ABOVE

STORM CATCH BASIN
TYPE II
RIM=16.36
IE=13.34,12"CONC NW
IE=13.21, 12"CONC SE
IE=13.39, 15"CONC SW

STORM CATCH BASIN
TYPE II
RIM=16.55
IE=12.57, 12"PVC NW
IE=6.67, 24"CONC NE
IE=7.07, 24"CONC SE
LADDER SW

INK FENCE

NORTH

HORIZONTAL SCALE: 1"=20'

20 0 20 40

GENERAL NOTES

1. SEE WO-L4 AND WO-L5 FOR PLANT SCHEDULE, NOTES AND DETAILS.
2. TREE SPACING TO CONFORM TO CITY OF TACOMA STREET TREE CLEARANCE STANDARD PLAN NO. LS-02, SEE 02/WO-L5.
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Project No.:	20,011	Project Mgr.:	R.J.J.
Proj. Engineer:	R.J.J.	Proj. Drafter:	K.L.K.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 02/05/2024 | SCALE AS NOTED
DESIGNED RJJ | CHECKED RJJ
SENIOR PM RJJ | PROJECT NAME
DRAWING NAME

STATE OF WASHINGTON RAYMOND J. JOHNSON 19,489 REGISTERED LANDSCAPE ARCHITECT 02/05/24

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
LANDSCAPE PLAN - SHEET 3

WO23-0096
WO-L3
SHEET NO.
SHEET 39 OF 46

O:\20000\20011\DRAWINGS\20011-WO-L3.DWG

Plotted By: Stephen Jackson 2/2/2024 1:46 PM

LANDSCAPING NOTES

UNDERGROUND CONDITION

LOCATE UTILITY LINES AND UNDERGROUND OBSTRUCTIONS TO AVOID DAMAGE DURING CONSTRUCTION. REPAIR ANY DAMAGE TO UTILITIES, BUILDING, PAVING OR OTHER WORK AT YOUR EXPENSE.

LANDSCAPE AREA GRADING

FINISH SUBGRADE AND OBTAIN APPROVAL OF ENGINEER PRIOR TO PLACING ANY TOPSOIL. FINISH SUBGRADE SHALL BE SMOOTH AND CONFORM TO THE FINAL FINISH GRADE AFTER TOPSOIL PLACEMENT. ALLOW FOR ADDED TOPSOIL AND MULCH IN INDIVIDUAL PLANTINGS AS SPECIFIED. COMPACT ALL LANDSCAPE SUBGRADE TO 90% OF OPTIMUM DENSITY PER ASTM D 1557.

FINISH GRADE OF PLANTING WHERE ABUTTING PAVING OR CURBS SHALL BE 1/2 INCH BELOW TOP OF PAVING. SLOPE ALL PLANTING AREAS AT A MINIMUM OF 1/4 INCH PER FOOT TO PROVIDE POSITIVE DRAINAGE AWAY FROM PLANTINGS.

SOIL CONDITIONS

VERIFY EXISTING SOIL CONDITIONS FOR CONTAMINANTS THAT MAY HAVE BEEN DISCARDED BY OTHER TRADES, SUCH AS THINNER AND PLASTER. REPORT FINDINGS IMMEDIATELY TO ENGINEER.

NOTIFY THE ENGINEER OF ADVERSE SOIL DRAINAGE CONDITIONS WHICH MAY POTENTIALLY AFFECT PLANT GROWTH (E.G. SATURATED SOIL, CLAY, HARDPAN, HIGH GRAVEL OR ROCK CONTENT, CONCRETE, ETC.)

PLANTING BED PREPARATION AND TOPSOILING
(EXCEED MINIMUM REQUIREMENTS OF CITY OF TACOMA BMP L613 AS DEFINED BELOW)

OBTAIN APPROVAL OF SUBGRADE PREPARATION PRIOR TO INSTALLING IMPORTED TOPSOIL AND COMPOSTED MULCHES.

SUBSOILS SHALL BE SCARIFIED TO 6 INCH DEPTH. ADD 3 INCH DEPTH OF IMPORTED TOPSOIL MIX TO SURFACE AND TILL TO DEPTH OF 6 INCH.

INSTALL 6 INCH MINIMUM DEPTH TOPSOIL OVER THE PREPARED SUBGRADE. TOPSOIL SHALL BE 40% PER VOLUME COMPOST AND 60% PER VOLUME SANDY LOAM THROUGH 7/16" SCREEN. PRE-APPROVED MULCH SHALL BE CEDARGROVE COMPOST. PH SHALL BE FROM 6.0 TO 8.0. COMPACT TO 85% OF MAXIMUM DENSITY.

SUBMIT 1 POUND SAMPLE AND SOIL ANALYSIS FROM SOIL MANUFACTURER FOR APPROVAL BY ENGINEER. MANUFACTURED TOPSOIL SHALL PROVIDE ALL COMPONENTS NECESSARY FOR OPTIMUM PLANT GROWTH. COMPOST MUST HAVE AN MINIMUM ORGANIC MATTER CONTENT OF 10% AND A CARBON TO NITROGEN RATIO BELOW 25:1.

RAKE TURFGRASS ROUGH FINISH GRADE TO FORM SMOOTH SURFACE AND GRADE TRANSITIONS. REMOVE ANY DEBRIS OR ROCK LARGER THAN 1 INCH FROM SURFACE. ROLL AND WATER SURFACE, THEN LIGHTLY RAKE JUST PRIOR TO HYDROSEEDING TO PROVIDE MOIST PLANTING BED.

SEED MIX TO BE 68% TURF TYPE PERENNIAL RYEGRASS (THREE VARIETIES), 16% CREEPING RED FESCUE AND 16% CHEWINGS FESCUE BY WEIGHT.

HYDROSEEDING APPLICATION RATE PER ACRE

2000#	WOOD FIBER MULCH
220#	SEED MIX
500#	10-12-20 FERTILIZER
220#	SULFER COATED UREA
40#	TACKIFIER
30-60#	STAY MOIST

HYDROSEED APPLICATION TO OCCUR BETWEEN MARCH 1 AND OCTOBER 1.

MULCHING

AFTER PLANTINGS AND CLEANING PLANTING GRADE, INSTALL 3 INCH MINIMUM OF DEPTH ARBORIST WOODCHIPS MULCH OVER THE TOPSOIL. DO NOT BURY PLANTS.

FERTILIZER

PLANTS AND GROUNDCOVER: OSMOCOTE 18-6-12 FOR TOP DRESSING SHRUB AND GROUNDCOVER AREAS AT A RATE OF 20 LBS. PER 1,000 SQUARE FEET PRIOR TO ADDING MULCH TO FINISH TOPSOIL GRADE. INSTALL AGRIFORM 20-10-15 PLANTING TABLETS FOR PLANTING PITS AS SHOWN IN PLANTING DETAILS.

PLANTING

AFTER PLACEMENT OF TOPSOIL, STAKE PLANT LOCATIONS FOR ACCEPTANCE BY THE ENGINEER. MAKE REQUIRED FIELD ADJUSTMENTS AS DIRECTED. AVOID OBSTRUCTIONS. LARGE BLOCKS OF PLANTING MAY BE STAKED OUT BY BOUNDARY RATHER THAN INDIVIDUAL PLANTS.

IRRIGATION

IRRIGATION TO BE CARRIED OUT BY HAND WATERING. INSTALL TREE WATERING BAG AT BASE OF EACH PROPOSED TREE (TREEGATOR 20 GALLON BAG OR APPROVED EQUAL-CHECK WATER LEVEL WEEKLY). PROVIDE 1 INCH OF WATER PER WEEK DURING DRY SEASON TO TURFGRASS AREAS.

QUALITY ASSURANCE

ALL PLANT MATERIAL TO BE IN HEALTHY THRIVING CONDITION. PROTECT ALL PLANT MATERIAL FROM HARM. HEAL-IN AND WATER ALL ROOTBALLS IF NOT PLANTED THE SAME DAY AS DELIVERY. REMOVE UNSATISFACTORY MATERIALS FROM SITE. PLANT DURING PERIODS NORMAL FOR OPTIMAL GROWTH, AS DETERMINED BY SEASON, WEATHER CONDITIONS AND ACCEPTED PRACTICE.

CONTRACTOR TO MAINTAIN TURFGRASS FOR A TOTAL OF 3 MOWINGS. ACCEPTABLE STAND OF GRASS IS FULL COVER-NO BARE SPOTS.

PLANT SCHEDULE

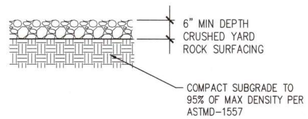
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE/SPACING	CONDITION	DETAIL	S/M/L	PNW NATIVE
•	GINKGO B. 'PRINCETON SENTRY'	PRINCETON SENTRY GINKGO	73	2.5" CALIPER, SPACE AS SHOWN	B&B	01 & 02/ WO-L5	S	NO
+	MALUS TSCHONOSKII	TSCHONOSKI CRABAPPLE	35	2.5" CALIPER, SPACE AS SHOWN	B&B	01 & 02/ WO-L5	S	NO
	ACER GINNALA 'FLAME'	FLAME AMUR MAPLE	6	2.5" CALIPER, SPACE AS SHOWN	B&B	01 & 02/ WO-L5	S	NO
	TURFGRASS HYDROSEED OVER PREPARED SUBGRADE AND FINISH GRADE. SEE DETAIL 02, THIS SHEET.		38,000 S.F.					

NOTES:

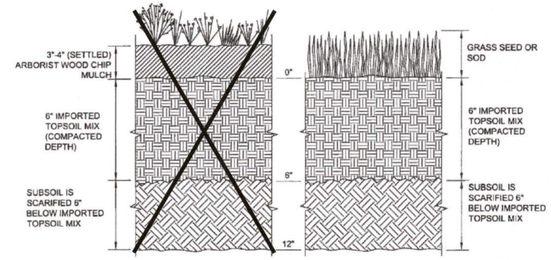
1. CONTRACTOR SHALL VERIFY QUANTITIES INDICATED W/ LANDSCAPE PLANS. SHOULD DISCREPANCY OCCUR BETWEEN THE PLANTING SCHEDULE AND LANDSCAPE PLANS, PLAN LOCATIONS & QUANTITY SHALL PREVAIL.
2. SEE WO-L5 FOR ADDITIONAL LANDSCAPE DETAILS.

STREET TREE CALCULATIONS:

MAXWELL WAY-1784 L.F. X $\frac{1}{100}$ = 71.36 OR 72 SMALL TREES. 73 SMALL TREES ARE PROVIDED.
THORNE ROAD-898 L.F. X $\frac{1}{100}$ = 35.92 OR 36 SMALL TREES. 34 SMALL TREES ARE PROVIDED.
PORT OF TACOMA ROAD-100 L.F. X $\frac{1}{100}$ = 4 SMALL TREES. 6 SMALL TREES ARE PROVIDED.



01 CRUSHED ROCK SURFACING
SCALE: N.T.S.



OPTION 4: Import topsoil mix of sufficient organic content and depth to meet the requirements. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be restored as described below.

Scarification: scarify or till subgrade in two direction to 6 inches depth. Entire surface shall be disturbed by scarification. Do not scarify within drip line of existing trees to be retained.

A. Planting Beds	B. Turf (Lawn) Areas
Use imported topsoil mix containing 10% organic matter (typically around 40% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.	Use imported topsoil mix containing 5% organic matter (typically around 25% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.
Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3" - 4" of organic mulch or stockpiled duff.	Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.

Setbacks: to prevent uneven settling, do not compost-amend soils within 3 feet on center of utility infrastructure (poles, vaults, meters etc.). Within one foot of pavement edge, curbs and sidewalks; soil should be compacted to approximately 90% max. modified proctor density (ASTM D1557) to ensure a firm surface. Do not compact within tree protection zone. See Std. Plans LS-08 and LS-09.

See SWMM BMP L613 for additional information.

REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	Greg S ENVIRONMENTAL SERVICES		BMP L613 POST CONSTRUCTION SOIL QUALITY AND DEPTH
NA TACOMA POWER	NA TACOMA WATER	CITY ENGINEER 4/4/24 DATE	OPTION 4 - IMPORTED TOPSOIL STANDARD PLAN NO. GSI-01d

02 POST CONSTRUCTION SOIL QUALITY
SCALE: N.T.S.

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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Proj. Engineer:	R.J.J.	Proj. Drafter:	K.L.K.

NO	REVISION	DATE	APPD

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FIELD BOOKS

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DRAWING NAME

STATE OF WASHINGTON RAYMOND J. JOHNSON 19,449 REGISTERED LANDSCAPE ARCHITECT 02/05/24

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
LANDSCAPE NOTES AND DETAILS

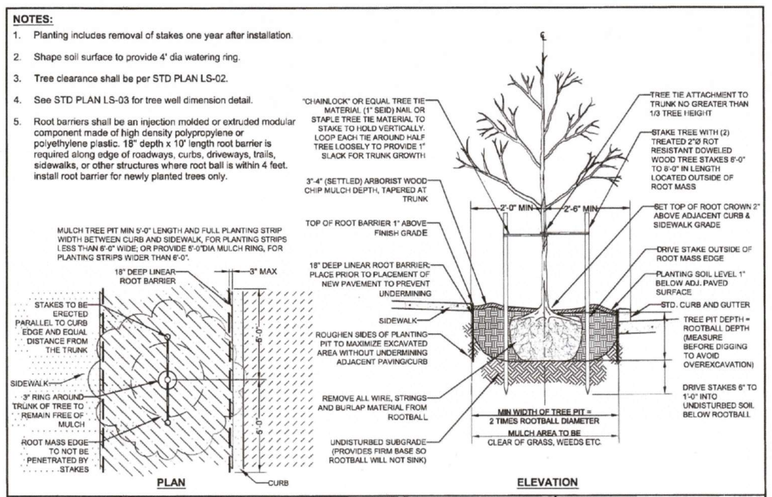
WO23-0096
WO-L4
SHEET NO.
SHEET 40 OF 46

O:\20000\20011\DRAWINGS\20011-WO-L4.DWG

Plotted By: Stephen Jackson 2/2/2024 1:46 PM

NOTES:

1. Planting includes removal of stakes one year after installation.
2. Shape soil surface to provide 4" dia watering ring.
3. Tree clearance shall be per STD PLAN LS-02.
4. See STD PLAN LS-03 for tree well dimension detail.
5. Root barriers shall be an injection molded or extruded modular component made of high density polypropylene or polyethylene plastic. 18" depth x 10' length root barrier is required along edge of roadways, curbs, driveways, trails, sidewalks, or other structures where root ball is within 4 feet. install root barrier for newly planted trees only.



CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION — CITY ENGINEER — DATE 7/6/15	STREET TREE PLANTING — STANDARD PLAN NO. LS-01

01 STREET TREE PLANTING
SCALE: N.T.S.

NOTES:

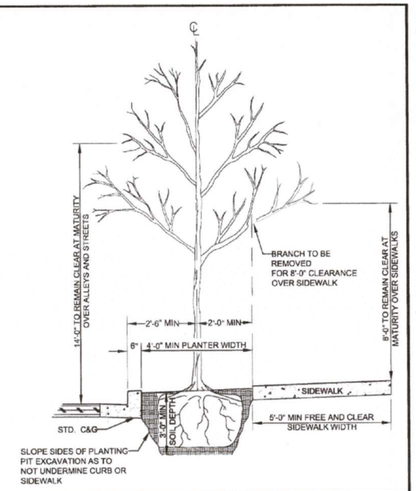
1. Street trees shall have a trunk free of branches up to the height listed below when planted:
   - A. Small trees, whose mature height is 15 to 25 feet, shall have a trunk free of branches up to a minimum of 4 feet.
   - B. Conifer/evergreen trees shall have a trunk free of branches up to a minimum of 2 feet.
   - C. Trees with ascending branches (examples - Ulmus Americana and Zelkova Serrata) may be branched 1 foot or More below the standard height and still provide proper clearance when planted.
   - D. All other trees shall have a trunk free of branches up to a minimum of 8 feet.
2. Street trees shall not be less than 1.5 inches in caliper for broadleaf trees or 6 feet in height for evergreen/conifers.
3. For minimum unpaved planting area dimensions refer to tree well dimension detail, STANDARD PLAN NO. LS-03.
4. The accessible portion of the sidewalk must be a minimum of 5 feet and be free of obstructions.

MINIMUM TREE SETBACKS (AT PLANTING):

Centerline of tree to centerline of:	
Street corner (extension of outside face of curb)	25'-0"
Stop or yield sign	25'-0"
Utility pole	15'-0"
Other traffic control sign	5'-0"
Centerline of tree to edge of:	
Driveway	5'-0"
Face of curb	2'-6"
Pavement	2'-0"
Edge of tree to edge of:	
Utility worker access lids	5'-0"
Gas shutoff valves	5'-0"
Fire hydrant & hydrant branch	10'-0"
Water meter, water service & water mains	5'-0"
Storm inlet, cb, & manhole	5'-0"
Storm/sanitary service connections & mains	5'-0"

MINIMUM TREE CLEARANCES (AT MATURITY):

Lowest branch to surface of:	
Streets	14'-0"
Sidewalks	8'-0"



CITY OF TACOMA DEPARTMENT OF PUBLIC WORKS	APPROVED FOR PUBLICATION — CITY ENGINEER — DATE 7/6/15	STREET TREE CLEARANCE — STANDARD PLAN NO. LS-02

02 STREET TREE CLEARANCE
SCALE: N.T.S.

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ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

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Project No.:	20,011	Project Mgr.:	R.J.J.
Proj. Engineer:	R.J.J.	Proj. Drafter:	K.L.K.

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED — BY — DATE — FIELD BOOKS

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STATE OF WASHINGTON — RAYMOND J. JOHNSON — 140 REGISTERED LANDSCAPE ARCHITECT — 02/05/24

ASST. CONSTRUCTION DIVISION MANAGER

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
LANDSCAPE NOTES AND DETAILS

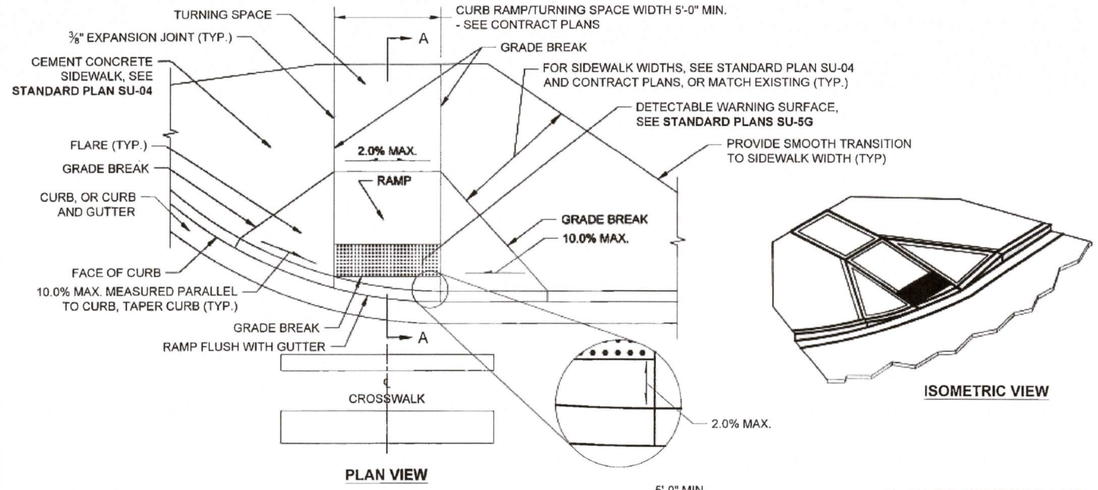
WO23-0096
WO-L5
SHEET NO. 41 OF 46
SHEET

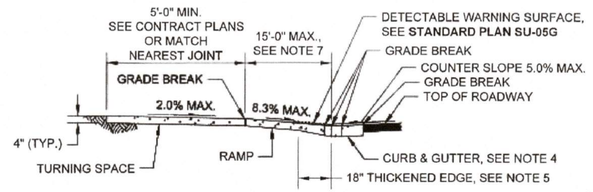
Plotted By: Todd, James 6/6/2025 1:19 PM

GENERAL NOTES:

1. Provide a separate directional curb ramp for each marked or unmarked crosswalk. Directional curb ramps are preferred over 45 degree ramps. Curb ramp location shall be placed within the width of the associated crosswalk, or as shown on the Contract Plans. The curb ramp centerline shall be parallel to the direction of the crossing. Forty-five (45) degree curb ramps shall be installed only after approval by the City's ADA Coordinator or the Street Operations Division Manager.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush and perpendicular to the direction of travel. There shall be no vertical discontinuity between the base of curb ramp and gutter line.
3. Do not place grates, junction boxes, access covers, or other appurtenances in front of the curb ramp or on any part of the curb ramp or turning space. Placement on or in front of ramp flares is allowed.
4. See Contract Plans for the curb design specified. See **Standard Plan SU-03** and **SU-03A** for Curb, and Curb and Gutter Details.
5. A thickened edge shall be constructed to full depth of adjacent curb along entire curb radius.
6. For sidewalk and curb ramps within the North Slope Historical District area **see North Slope Historic District Site Map, HD-NS01.** Apply Lamp Black 1lb. per cubic yard of cement concrete or as required for discoloration in accordance with ASTM D209-81 Standard Specifications for Lamp Black pigment.
7. The running slope of a curb ramp shall not exceed 8.3% but does not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades.
8. Curb ramp, turning space and flares shall receive a broom finish, see **WSDOT Standard Specifications 8-14**.
9. Return curbs, (pedestrian curbs), may only be used with landscaping or railing. Return curbs, (pedestrian curbs), shall not be used to prevent pedestrians from crossing streets.
10. All curb ramp designs shall be stamped by a Washington State licensed Professional Engineer. If meeting the current design standards is not possible, curb ramps shall be constructed to the maximum extent feasible as indicated by an Engineer's note on the stamped drawings. Rationale supporting the design variance shall be provided by the Engineer and shall include a description of the scope of work, the site-specific factors affecting compliance, and the measures implemented to improve compliance.
11. Pedestrian traffic should be aligned to the receiving curb ramp. The existing curb ramps shall be evaluated using criteria in the City's Curb Ramp Installation Matrix.
12. Consult the City's Curb Ramp Installation Matrix and the Right Of Way Restoration Policy for additional requirements.
13. Conduit for APS equipment shall be installed during curb ramp construction at all signalized intersections and at intersections where signalization is anticipated within the next 6 years. Coordinate with Public Works - Engineering, Traffic Section.
14. A Pedestrian Accessibility Control Plan shall be developed in conjunction with each project-specific Temporary Traffic Control Plan for all work in the ROW.
15. Pedestrian traffic shall NOT be directed behind the stop bar.
16. Curb ramp alignment should be consistent with crosswalk alignment
17. Curb ramp shall be 5' minimum in width.
18. Catch basins shall be located upstream of curb ramps outside of flare/wing for new construction or when performing storm sewer upgrades.
19. For constructability purposes, the City recommends designing to **less than** the maximum allowable slopes.

REVIEWED BY			APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	GMS ENVIRONMENTAL SERVICES			CURB RAMP DETAILS GENERAL INFORMATION
NA TACOMA POWER	NA TACOMA WATER		8/16/16 CITY ENGINEER DATE	STANDARD PLAN NO. SU-05





SECTION DETAIL A-A

NOTES:

See **Standard Plan SU-05** for referenced notes

LEGEND

SLOPE IN EITHER DIRECTION

REVIEWED BY			APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	GMS ENVIRONMENTAL SERVICES			PERPENDICULAR CURB RAMP TYPE 'A'
NA TACOMA POWER	NA TACOMA WATER		8/16/16 CITY ENGINEER DATE	STANDARD PLAN NO. SU-05A

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY DATE FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
TACOMA DETAILS

WO23-0096
WO-D1
SHEET NO. 42 OF 46

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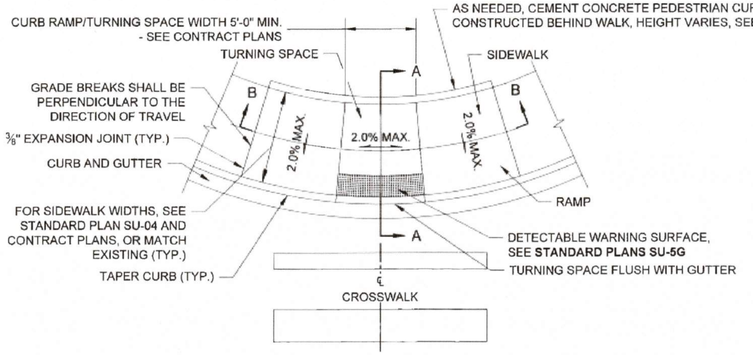
Plotted By: Todd, James 6/6/2025 1:19 PM



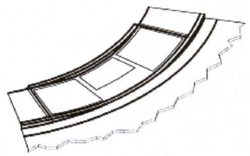
PLAN VIEW

NOTES:

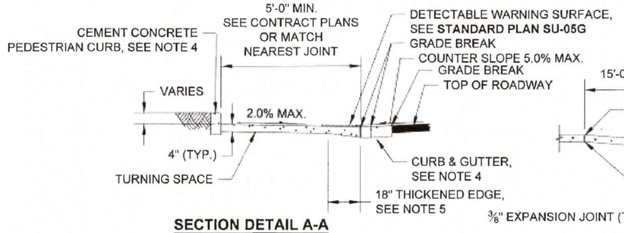
See **Standard Plan SU-05** for referenced notes

LEGEND

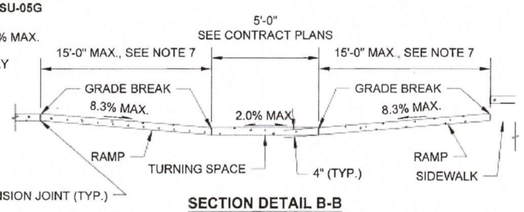
——— SLOPE IN EITHER DIRECTION



ISOMETRIC VIEW



SECTION DETAIL A-A

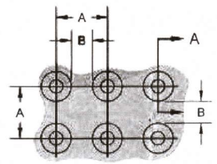


SECTION DETAIL B-B

REVIEWED BY			APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	GMS ENVIRONMENTAL SERVICES			PARALLEL CURB RAMP TYPE 'A'
NA TACOMA POWER	NA TACOMA WATER		8/16/16 CITY ENGINEER DATE	STANDARD PLAN NO. SU-05D

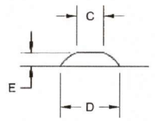
NOTES:

1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares) or the turning area.
2. The rows of truncated domes in a Detectable Warning Surface shall be parallel with the direction of wheelchair travel.
3. See **Standard Plans SU-04** through **SU-05F** for sidewalk and curb ramp details.
4. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
5. The Detectable Warning Pattern shall be installed using Vanguard ADA Systems, ADA Solutions, or Armor-Tile "Cast in Place Systems," manufactured by Engineering Plastics Inc., or approved equal. Concrete shall be blocked out as required for the installation of the Detectable Warning Pattern material.
6. The Detectable Warning Pattern area shall be yellow and shall match the color of Federal Standard 595a, color number 33538.
7. See **Standard Plan SU-05H** for Detectable Warning Surface placement guidelines.



TRUNCATED DOME DETAILS

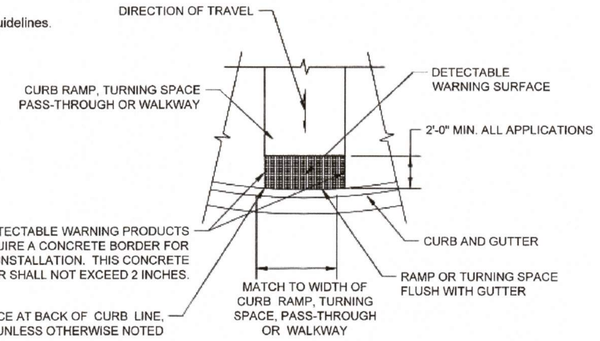
TRUNCATED DOME SPACING



	MIN.	MAX.
A	1.60"	2.40"
B	0.65"	-
C	0.45"	0.90"
D	.90	1.40"
E	0.20"	0.20"

SECTION DETAIL A-A

TRUNCATED DOME



DETECTABLE WARNING SURFACE DETAIL

REVIEWED BY			APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	GMS ENVIRONMENTAL SERVICES			DETECTABLE WARNING SURFACE DETAILS
NA TACOMA POWER	NA TACOMA WATER		8/16/16 CITY ENGINEER DATE	STANDARD PLAN NO. SU-05G

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

6/6/2025
SITE AND BUILDING DIVISION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

THORNE ROAD
OFF DOCK CONTAINER YARD
TACOMA DETAILS

WO23-0096
WO-D2
SHEET NO.
SHEET 43 OF 46

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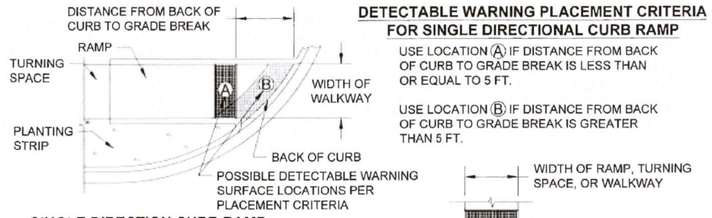
Plotted By: Todd, James 6/6/2025 1:19 PM

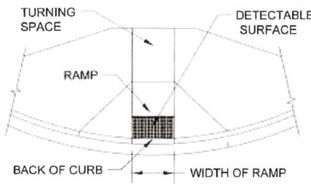
DETECTABLE WARNING PLACEMENT CRITERIA FOR SINGLE DIRECTIONAL CURB RAMP



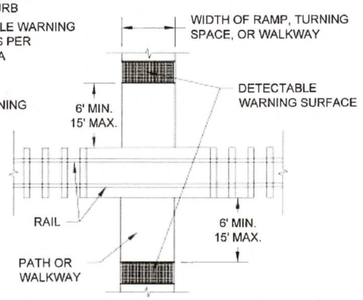
USE LOCATION (A) IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS LESS THAN OR EQUAL TO 5 FT.

USE LOCATION (B) IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS GREATER THAN 5 FT.

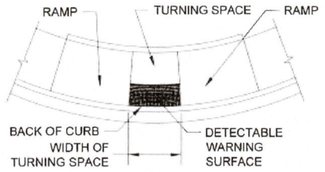
SINGLE DIRECTION CURB RAMP



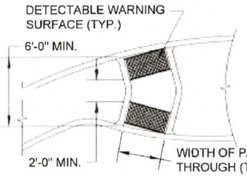
PERPENDICULAR CURB RAMP
(SEE SU-05A AND SU-05B)



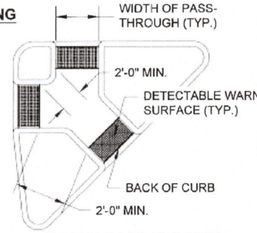
PEDESTRIAN RAILROAD CROSSING



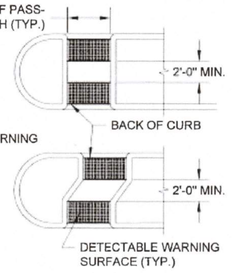
PARALLEL CURB RAMP
(SEE SU-05C, SU-05D, AND SU-05E)



ROUNDABOUT SPLITTER ISLAND



ISLAND PASS-THROUGH



MEDIAN PASS-THROUGH

NOTES:

1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares) or the turning space.
2. The edge of the Detectable Warning Surface shall be placed along the back of the curb line unless otherwise noted.
3. The Detectable Warning Surface shall be within 2" (max.) of the edge of the ramp.
4. The rows of truncated domes in the Detectable Warning Surface shall be parallel with the direction of travel.
5. See Standard Plans for sidewalk and curb ramp details.
6. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
7. The Detectable Warning Pattern shall be installed using Vanguard ADA Systems, or Armor-Tile "Cast in Place Systems" as manufactured by Engineering Plastics Inc., or approved equal. Concrete shall be blocked out as required for the installation of the Detectable Warning Pattern material. See **Standard Plan SU-05G** for additional information.
8. The Detectable Warning Pattern area shall be yellow and shall match the color of Federal Standard 595a, Color Number 33538 unless otherwise noted.

REVIEWED BY GMS			APPROVED FOR PUBLICATION	CITY OF TACOMA
DCS PUBLIC WORKS	ENVIRONMENTAL SERVICES			DETECTABLE WARNING SURFACE PLACEMENT GUIDELINES
NA TACOMA POWER	NA TACOMA WATER		8/16/16 CITY ENGINEER — DATE	STANDARD PLAN NO. SU-05H

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED — BY — DATE — FIELD BOOKS

DATE: 6/6/2025 | SCALE: AS NOTED
DESIGNED: JAT | CHECKED: JMB
SENIOR PM: JAT | PROJECT NAME
DRAWING NAME

6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
TACOMA DETAILS

WO23-0096
WO-D3
SHEET NO. 44 OF 46

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Plotted By: Todd, James 6/6/2025 1:19 PM

	TYPE	Heavy Haul Industrial Corridors	Port Area Arterials	Non-classified Port-Area Roadways	Primary Transit Streets	Principal Arterials	Minor Arterials	Collector Arterials	Nonclassified Arterials and Commercial Alleys	Residential	Residential Alleys	Shared use Paths and Trails
AASHTO Flexible Pavement Design Standards	Tacoma Municipal Code Ref.	11.55.020.C	11.05.490, 13.10	13.10	11.05.492	11.05.490	11.05.490	11.05.490	11.05.490			
	Initial ADT	30,000	20,000	10,000	30,000	30,000	20,000	15,000	10,000	2,000	500	100
	% ADT, Truck	30	30	30	8	8	8	5	5	5	5	1
	% ADT, Bus	0	0	0	5	1	1	1	1	0	0	0
	GROWTH RATE (compound)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Assumed CBR	1	1	1	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	Assumed Mr	2,555	2,555	2,555	6,690	6,690	6,690	6,690	6,690	6,690	6,690	6,690
	Lanes in Design Direction	2	1	1	2	2	1	1	1	1	1	1
	Percent Trucks, Design Direction	50	50	50	50	50	50	50	50	100	100	100
	Percent Trucks, Design Lane	80	100	100	80	80	100	100	100	100	100	100
	DESIGN EAL	26,367,106	21,972,588	10,986,294	8,430,756	5,878,017	4,898,348	2,445,675	1,364,540	994,831	49,365	4,087
	Reliability, R%	95%	95%	90%	95%	95%	90%	90%	85%	85%	80%	80%
	Deviation, S_o	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	Initial Serviceability, P_i	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20
	Terminal Serviceability, P_t	2.5	2.5	2.4	3	3	2.7	2.5	2.4	2.3	2.2	2.2
	Δ PSI	1.70	1.70	1.80	1.20	1.20	1.50	1.70	1.80	1.90	2.00	2.00
	Design SN	8.19	8.12	6.89	5.89	5.6	4.81	4.18	3.58	3.41	2.03	1.3

Refer to PD-01 Sheet 2 for pavement design sections and notes.

REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA PAVEMENT DESIGN STANDARDS
DCS PUBLIC WORKS	ENVIRONMENTAL SERVICES	CITY ENGINEER	SHEET 1 OF 2
NA TACOMA POWER	NA TACOMA WATER	9/4/25 DATE	STANDARD PLAN NO. PD-01

	TYPE	Heavy Haul Industrial Corridors	Port Area Arterials	Non-classified Port-Area Roadways	Primary Transit Streets	Principal Arterials	Minor Arterials	Collector Arterials	Nonclassified Arterials and Commercial Alleys	Residential	Residential Alleys	Shared use Paths and Trails
Standard Asphalt Pavement Section	HMA	10	10	8	8	8	6	6	5	4	2	2
	CSTC	2	2	2	2	2	2	2	2	2	2	2
	CSBC	26	24	22	16	14	14	9	8	10	6	2
Minimum Asphalt Pavement Section with Approved Design	HMA	8	8	6	6	6	6	4	4	3	2	2
	CSTC	2	2	2	2	2	2	2	2	2	2	2
	CSBC	10	10	10	10	8	6	6	6	5	4	
Minimum Concrete Pavement Section with Approved Design				*Concrete Streets are allowed with approved supporting design.*								
	PCC	10	10	8	10	10	10	8	8	8	8	4
	CSBC	2	2	2	2	2	2	2	2	2	2	2
Standard Porous Asphalt Pavement Section	HMA	NA	NA	Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	4	2	3
	ATPB			Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	4	3	0
	Permeable Base			Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	6 (Note 7)	4 (Note 7)	4 (Note 7)
Minimum Porous Asphalt Pavement Section with Approved Design	HMA	NA	NA	Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	2	2	3
	ATPB			Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	3	3	0
	Permeable Base			Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	6 (Note 7)	6 (Note 7)	4 (Note 7)
Minimum Pervious Concrete Section	PCPC	NA	NA	Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	8	7	7
	Permeable Base			Note 6	Note 6	Note 6	Note 6	Note 6	Note 6	4 (Note 7)	4 (Note 7)	4 (Note 7)

NOTES:

1 Standard Pavement Section shall be used when no custom design is provided
2 Minimum Pavement Sections are the minimum acceptable pavement sections for custom designs
3 Refer to the City of Tacoma Design Manual for additional road design information.
4 Pavement sections for other facilities, such as parking lots, shall be substantiated by geotechnical analyses and design documentation.
5 Pavement design for State routes-shall be determined by the Washington State Department of Transportation.
6 Contact Public Works Engineering to discuss acceptability and requirements for specific projects. Design required if acceptable.
7 Minimum Structural Values, Hydrological Properties may require a thicker base.
8 Permeable pavement shall be designed or reviewed by a geotechnical professional. All custom designs shall be stamped by a Washington State licensed professional engineer. Calculations showing the required permeable ballast thickness necessary for stormwater control is required for all permeable pavement projects. Refer to the City of Tacoma Stormwater Management Manual.

NA = Not Allowed

REVIEWED BY		APPROVED FOR PUBLICATION	CITY OF TACOMA PAVEMENT DESIGN STANDARDS
DCS PUBLIC WORKS	ENVIRONMENTAL SERVICES	CITY ENGINEER	SHEET 2 OF 2
NA TACOMA POWER	NA TACOMA WATER	9/4/25 DATE	STANDARD PLAN NO. PD-01

ISSUED FOR CONSTRUCTION
DATE: 2025-08-25

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED BY / DATE / FIELD BOOKS
DATE 6/6/2025 | SCALE AS NOTED
DESIGNED JAT | CHECKED JMB
SENIOR PM JAT | PROJECT NAME
DRAWING NAME

6/6/2025

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD
OFF DOCK CONTAINER YARD
TACOMA DETAILS

WO23-0096
WO-D4
SHEET NO. 45 OF 46

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CITY OF TACOMA RIGHT OF WAY GENERAL NOTES

GENERAL

A.The following special provisions are to be used in conjunction with the City of Tacoma Special Provisions, City of Tacoma Standard Plans and City of Tacoma Right-of-Way Design Manual, " 2022 Standard Specifications for Road, Bridge and Municipal Construction" and "Standard Plans for Road, Bridge and Municipal Construction" as prepared by the Washington State Department of Transportation (WSDOT).
B.Any inconsistency between these work order drawings and the 2022 Standard Specifications or the WSDOT Standard Plans shall be resolved by the following order of precedence (e.g., 1 presiding over 2, 3, and so forth):

1. Approved Work Order Drawings
2. City of Tacoma Special Provisions, including APWA General Special Provisions, as applicable
3. City of Tacoma Right-of-Way Design Manual
4. Amendments to WSDOT Standard Specifications
5. 2020 WSDOT Standard Specifications
6. City of Tacoma Standard Plans
7. WSDOT Standard Plans

C.Any revisions to these plans must be submitted as a Field Revision through Planning Development Services, reviewed and approved by the City of Tacoma prior to any implementation in the field.
D.Contractors shall familiarize themselves with the site and shall bring any discrepancies to the attention of the Engineer of Record prior to undertaking the affected work.
E.Any discrepancy in these drawings, specifications, these notes, and the site conditions shall be reported to the Engineer of Record, who shall correct such discrepancy in writing after reviewing any changes. Any work done by the Contractor after the discovery of such discrepancy shall be done at the Contractor's risk. The Contractor shall verify and coordinate the dimensions among all drawings with their field survey and measurements prior to proceeding with any work.
F.A pre-construction meeting, if required shall be held between the City of Tacoma, the applicant, contractor, and City inspectors prior to issuance of a Work Order permit.
G.No traffic shall be allowed on any newly placed pavement without the approval of the City Inspector.
H.Cold Weather Concrete Work. The following requirements for placing concrete shall be in effect from November 1 to April 1:

1. The Inspector shall be notified at least 24 hours prior to any concrete placement.
2. Weather permitting, all concrete placement shall be completed no later than 2:00 p.m. each day.
3. Where forms have been placed and the subgrade has been subjected to severe frost, no concrete shall be placed until the ground is completely thawed.

At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

ADDITIONAL PERMITS

A.Separate site development and building permits are required for on-site work including all retaining walls, grading, and erosion control. Adherence to all conditions of these permits is required as a part of this plan.
B.Separate right-of-way construction permits are required for sidewalk installation, as well as, curb and gutter removal and driveway construction when constructed under a site development permit and not a work order.
C.Separate storm and sanitary sewer connection permits are required for each individual connections to the stormwater or wastewater systems and/or each individual treatment device, whichever total is greater. These are over the counter permits.
D.New franchise site services require separate right-of-way utility permits to serve the site. Final restoration shall be coordinated by the project.

SAFETY/EXCAVATION

A.The existing underground utilities shown hereon are based upon available existing record drawings and are not guaranteed to be accurate, nor all-inclusive.
B. All utilities must be verified prior to construction. If the project requires any excavation, the developer/contractor is required to call the Utility Underground Location Center at (800) 424-5555 at least two business days before starting such excavation in accordance with RCW 19.122.
C.It shall be the Contractor's responsibility to protect, in place, all utilities and/or structures whether shown or not shown on this plan. Damage due to the Contractor's operations shall be repaired at the Contractor's expense. A preliminary walk through with photos shared with the inspector prior to the start of work is advised.
D.If workers enter any trench or other excavation four feet or more in depth that does not meet the open pit requirements of Section 2-09.3(3)B, it shall be shored and cribbed. All trench safety systems shall meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Contractor alone shall be responsible for all worker safety, and neither the City of Tacoma nor the Engineer of Record assumes any responsibility.

PAVEMENT PREPARATION / RESTORATION

A. Additional removal and replacement of pavement may be required to provide proper transition/crown as directed by the City of Tacoma Inspector in the field. Final restoration limits shall be determined in the field by the City of Tacoma Inspector.
B. The street sections shown on this plan are designed to be placed upon a firm and unyielding base.
C. Subgrade compaction shall be tested by a testing professional prior to placing base material.
D.Pavement Preparation shall meet all applicable requirements of City of Tacoma Right-of-Way Design Manual Chapter 4 Sections 5.4 and 5.5.
E. Mix design shall be based on Standard Plan PD-01-Pavement Design Standards and PD-02 Pavement Design Worksheet.
F.Pavement restoration shall be constructed in accordance with the City of Tacoma Restoration Policy and applicable Standard Plans.
G. Unsuitable material to be removed and replaced.
H.All permanent traffic channelization, such as but not limited to legends, raised pavement markings, paint, and signage, shall be restored to current Tacoma Standards. Temporary striping shall be maintained as indicated on the plans or as directed by the City of Tacoma Inspector.

HOT MIX ASPHALT

A. All standard hot mix asphalt shall be compacted to a minimum of 92 percent of the maximum density as determined by AASHTO T209. All standard hot mix asphalt utilized shall be considered compactable. The level of compaction attained will be determined as the average of not less than 5 nuclear density gauge tests taken on the day the mix is placed (after completion of the finish rolling) at randomly selected locations within each lot. The quantity represented by each lot will be no greater than a single day's production or approximately 400 tons, whichever is less.
B. All testing results shall be provided to the City Inspector within 48 hours of the test.
C. Control lots not meeting the minimum density standard shall be removed and replaced with satisfactory material.
D. In addition to the randomly selected locations for test of the control lot, the City Inspector reserves the right to test any area which appears defective and to require further compaction of areas that fall below acceptable density readings. These additional tests shall not impact the compaction evaluation of the entire control lot.
E. Hot mix asphalt pavement shall not be placed on any traveled way between October 1 and April 1, without written approval from a Planning and Development Services Review Engineer.

CONCRETE

A.Curing of concrete shall be in accordance with Section 5-05.3(13) of the Standard Specifications.
B.The slump for standard concrete used for sidewalks shall not exceed four inches +/- one inch.
C.Sidewalks and curb ramps shall be constructed in accordance with ADA Standards for Accessible Design, 28 CFR, Part 35 and as supplemented by the Public Works Right of Way Accessibility Guidelines (PROWAG).

SANITARY AND STORM SEWERS

A. 7-08.3(2)F Plugs and Connections:
Rigid Couplings, manufactured by Romac Industries, Inc., or City of Tacoma approved equal, shall be used at any pipe joint in which bell and spigot or fused joints are not used. Flexible couplings are not permitted.
B. 7-08.3(2)G Jointing of Dissimilar Pipe:
Dissimilar pipes shall be joined by use of rigid couplings manufactured by Romac Industries, Inc., or City of Tacoma approved equal, except for side sewer installation.
C.Sewers and appurtenances shall be cleaned and tested after backfilling by either exfiltration or low-pressure air method at the option of the Contractor, except where the ground water table is such that the Engineer may require the infiltration test.
D. All abandoned pipes encountered during construction and new stormwater and wastewater stub outs shall be sealed with a watertight pipe plug.
E. All frames and grates for standard catch basin inlets on this project shall be "vaned" type and shall conform to that shown on WSDOT Standard Plan No. B-30.10-03, B-30.30-03, and B-30.40-03.
F. Where existing catch basins are modified, grates may be required to be replaced with vaned grates. The City will make the final determination based on the condition of the existing grate and structure.
G. Recycled concrete aggregate shall not be used as gravel backfill where stormwater or groundwater may come into contact with the concrete aggregate, be collected and discharged to the stormwater system or receiving waterbody (such as underdrain systems.). Recycled materials used shall meet the requirements of all applicable local, state, and federal regulations including the City's SWMM, Right-of-Way Design Manual, and Tacoma Municipal Code as applicable to the give application.
H. New connections to brick manholes may be allowed on a case-by-case basis and will be assessed by City staff if it can be structurally cored. Manhole replacement may be required by the Environmental Services Department based upon the condition of the existing manhole.
I. The property side ends of the side sewers shall be marked in the field by means of a 2-inch by 4-inch board and locate wire that extends from the flow line of the side sewer to at least 1 foot above the finished lot grade.
J. After any new stormwater and/or wastewater pipes have been cleaned and the manholes channeled, the main(s) shall be televised for video inspection to provide a record of the constructed conditions and for the wastewater system to verify side sewer connection locations. The City of Tacoma will coordinate this inspection.

MISCELLANEOUS

A.Fences and structures replaced and/or relocated shall be maintained and remain functional.
B.Independent quality assurance sampling and testing will be provided by a certified independent laboratory for all improvements within the right-of-way. All special inspection reports shall be forwarded to the Site Development Group on a monthly basis consistent with the directions given in the preconstruction meeting, and/or as requested by the City of Tacoma inspector.
C. If hydrant water is needed the contractor is required to contact Tacoma Public Utilities, Water department, at (253) 502-8247, to obtain a permit. TPU may impose a fine for use of a non-registered water meter and/or backflow device.

EARTHWORKS, GRADING, EXCAVATION, AND EROSION CONTROL NOTES

A.All work is to be done in accordance with the approved grading plan, soils report, the most current WSDOT Standard Specifications For Road, Bridge And Municipal Construction, the 2021 City of Tacoma Stormwater Management Manual, City of Tacoma Standard Plans, and TMC 2.0.
B.When construction operations are such that debris from the work is deposited on the streets, the Contractor shall immediately remove any deposits or debris which may accumulate on the roadway surface. If the Contractor fails to keep the streets free from deposits and debris resulting from the work, the Contractor shall, upon order of the City of Tacoma Inspector, clean the streets and provide facilities for the removal of all rock and sediment from the tires and between wheels before trucks or other equipment will be allowed to travel over paved streets. Should the Contractor fail or refuse to clean the streets in question, or the trucks or equipment in question, the City of Tacoma Inspector may order the work suspended at the Contractor's risk until compliance with the Contractor's obligations is assured, or the City of Tacoma Inspector may order the streets in question cleaned by others and such costs incurred by the City in achieving compliance with these requirements, including cleaning of the streets, shall be charged to the work order account.
C.The Contractor shall protect existing drainage structures using acceptable methods and materials as shown on this plan. If the methods and materials as shown on this plan are not adequate, the City of Tacoma Inspector may require additional/alternative methods for erosion control and/or protection of existing drainage structures. Additional or alternative methods shall be submitted by the design engineer and accepted by the City of Tacoma Inspector. Any damage caused to the City of Tacoma stormwater system as a result of the work outlined on this plan shall be the sole responsibility of the Contractor. Resolving said damage may include, but not be limited to, the cleaning of the drainage system in question by the Contractor.
D.Watering provisions when applicable must be in place to prevent dust from becoming air borne. Violation of this condition will result in a stop work order until corrected.
E.Fill that will support a street section or other structures shall be placed under the inspection of a Washington State licensed Professional Engineer. Soil to be placed shall be tested and compacted to 95 percent of its maximum density. Engineer shall document existing site conditions, soil and its placement and allowable bearing capacity submitted. Standard requirements for cuts and fill are contained in the WSDOT Standard Specifications For Road, Bridges, and Municipal Construction.
F. A Construction Stormwater Pollution Prevention Plan (SWPPP) in accordance with the 2021 City of Tacoma Stormwater Management Manual is required for all projects with over 2,000 square feet of impervious surface.
G. Soil shall not remain unworked or exposed for more than 2 days.
H. Per TMC 10.22.140.C, no construction shall be performed nor shall any traffic lane be closed to traffic between Thanksgiving day and New Year's day within the downtown core and outlying business districts unless otherwise approved by the Director. View maps of these areas online:
https://www.cityoftacoma.org/government/city_departments/community_and_economic_development/neighborhood_business_districts

INSPECTIONS

A.All erosion control shall be in place prior to clearing except for that clearing necessary to install said erosion control measures. The contractor shall schedule an inspection for the City of Tacoma Inspector for initial erosion control inspection prior to start of work, per item E. below.
B.Erosion control measures shall be maintained at all times to the approval of the City of Tacoma Inspector.
C.Should temporary erosion and sedimentation control measures, as shown on plans become inadequate, the contractor shall install facilities as necessary to protect adjacent properties and the City of Tacoma drainage system, meeting approval of the City of Tacoma Inspector.
D.Not considered a complete list of inspections required. Call for inspection of the City of Tacoma Inspector upon completion of:
Erosion control measures and ongoing regular maintenance
Compaction reports on trenches prior to placement of crushed rock/backfill
Channeling of manholes
Air-testing of sewer mains
Compaction reports for crushed rock prior to placing asphalt
Any concrete work: inspection is required for subgrade, forms, and finish
Adjustments of Utilities
Monumentation
Stand Alone Permits: such as driveways, sidewalk, SEWER, STORM, RUTI, street lighting
WATER permits – these cover the connection from the meter to the house
Hydroseeding of cuts/fills and slope stabilization
Final clean-up and project completion
Construction Deficiency List (Punchlist)
E. All material removed from site shall be placed only at a permitted site. Verify location of destination of material prior to exportation. Material excavated from the site shall be discarded at an approved facility per Pierce County Health, Ecology.
F. All wastewater and stormwater pipes shall be video inspected by City Forces prior to paving where paving occurs over sewers. All other sewers will be video inspected prior to final acceptance of new mains.
G. If contaminated soils are suspected and/or encountered within the project contact your inspector. For more information contact the Department of Ecology.
H. All work performed by contractor shall comply with the procedures required WAC 296-62 and WAC 296-65. Contractor shall contact the Puget Sound Air Pollution Control Authority in Seattle at 206-344-7330 for information regarding removal and packaging and Pierce County Environmental Health Department in Tacoma, WA at 253-591-6571 for information regarding transportation and disposal.
I. Contractor shall conform to Department of Ecology's guidelines for contamination cleanup for projects within the Tacoma Smelter Plume Project Area. For more information contact the Department of Ecology at 360-407-7096.

TREE REMOVAL/PROTECTION

A. All areas that are cleared and grubbed, graded, excavated or filled are subject to stabilization. Any of these areas that are left unpaved or lack landscaping shall be hydroseeded or otherwise fully stabilized under the direction and approval of the Construction Inspector.
B. Hydroseeding may occur only during the periods of April 1 though May 31 or September 1 though October 15. Hydroseeding may be allowed during the months of June through August if irrigation is provided.
C. Monitor and maintain hydroseeded areas throughout the winter wet season to ensure that no erosion occurs.
D. Trees to be removed shall be clearly marked for removal. Trees to be saved shall be fenced with barricade fence at the drip line (outer edge of tree branches) to keep construction vehicles from compacting root zone and killing trees. This fencing shall be maintained until construction ends.
E . Tree protection measures to be installed with initial TESC measures and shall be maintained throughout the duration of site work. Refer to City of Tacoma Std. Plans LS-08 through LS-11.

TRAFFIC CONTROL

A. Per TMC 10..22.140.C, no construction shall be performed nor shall any traffic lane be closed to traffic between Thanksgiving day and New Year's day within the downtown core and outlying business districts unless otherwise approved by the Director. View maps of these areas online:
https://www.cityoftacoma.org/government/city_departments/community_and_economic_development/neighborhood_business_districts
B.Prior to the start of any work within the City of Tacoma ROW a complete TCP set shall be on site in addition to a complete set of approve drawing.

MONUMENT REMOVAL PERMIT PROCESS
A. "No survey monument shall be removed or destroyed (the physical disturbance or covering of a monument such that the survey point is no longer visible or readily accessible) before a permit is obtained from the Department of Natural Resources (DNR)." WAC 332-120-030(2) states "It shall be the responsibility of those performing construction work or other activity (including road and street resurfacing projects) to adequately search the records and the physical area of the proposed construction work or other activity for the purpose of locating and referencing any known or existing survey monuments." Construction shall not commence until WAC outlined in Chapter 332-120 is complied with.
B. Monuments on the plans shall be protected in place or the plans will call out the identified DNR permit for removal and replacement.

HORIZONTAL CONTROL AND VERTICAL CONTROL

Work in the right-of-way will be performed using construction staking established from two (2) City monuments for establishing control and basis of bearing. A list of survey monuments can be found at https://cms.cityoftacoma.org/PublicWorks/Engineering/LandSurvey/SurveyMons.pdf

HORIZONTAL AND VERTICAL CURVES

For all infrastructure constructed using horizontal and/or vertical curves, grade stakes must be set every 25 feet and at grade breaks with a minimum of 3 stakes for each curve. Stakes shall be placed at radius points on street returns.

STAKING REQUIREMENTS

A. Construction staking shall be per Standard Plan SU-26.
B. SANITARY SEWER AND STORMWATER
1. Clearing stakes if needed.
2.Stakes every 50 feet plus grade breaks. Try to maintain 12 foot offsets in streets and 8 foot offsets in alleys.
3.Double offsets at manholes and catch basins (ahead and back stakes at angle points).
4.Catch basin station shall be to the centerline of the basin. Catch basin offsets shall be to the face of the curb.
C. RESIDENTIAL STREETS AND PRIVATE ACCESSWAYS
1.Clearing stakes as needed.
2. Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
3.Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb. Curb stakes are set to the top of curb grade (Blue Tops).
4. Also stake the beginning and end of all approaches.
5. No centerline of street grades unless the street grade is warped. If street grades are needed, set blue tops for each course.
D. ARTERIAL STREETS
1.Clearing stakes as needed.
2.Slope stakes every 50 feet and grade breaks if cuts or fills exceed 2 feet.
3.Curb stakes every 50 feet and grade breaks, on 4 foot offset to the face of curb.
4.Curb stakes are set to the top of curb grade (Blue Tops). Also stake the beginning and end of all approaches.
5. Stake centerline and quarterline grade every 50 feet and grade breaks at grade for each course.
E. ALLEYS
1.Stake both sides every 50 feet and grade breaks, on a 2 foot offset to the edge of paving, with a cut or fill to edge of paving on high side and flow line on low side.
F. SIDEWALKS
1.Offsets for walks are set on 50' intervals and grade breaks normally at 2 foot to edge of walk and at edge of walk grade (Blue Tops).
2.Sidewalk alignment is normally at 5 feet from the face of curb. No walk grades are needed if curbs are built but running slope and cross slope per American with Disabilities must be met for all new walk meeting the design.

RECORD DRAWINGS CRITERIA FOR ACCEPTANCE OF ALL PRIVATE WORK ORDERS

A. Record drawings shall be received and accepted prior to issuing utility connection permits or release of performance bonds.
B. All revisions to the approved plans must be approved by the City of Tacoma prior to implementation of the changes.
C. A determination at the time of proposal to the Site Review Engineer shall be made whether the revision can be addressed with red line drawings submitted as a part of the record drawings or if it will require formal submission for approval.
D. Record drawings shall show the station, offset, centerline and gutter flowline elevations, to nearest 0.01 foot; for all horizontal and vertical roadway alignment changes, at the intersection end of radius points and at the beginning and end of new paving.
E. Record drawings shall show the station, offset, invert, and rim elevations to the nearest 0.01 foot for all stormwater and wastewater structures. (i.e.: manholes, catch basins, etc.)
F. Record drawings shall show all side sewers and shall locate them by measurements from permanent objects. (i.e.: curb, property corner, etc.) In addition, the depth of all side sewers shall be noted on the record drawings and locate board.
G. Record drawings shall show vertical and horizontal datum for survey monuments (existing or new construction) within the limits of the project.
H. Record drawings shall consist of a clean set of approved work order drawings with all changes noted above shown in red.
I. Record drawings, including the Engineer's Certification, as applicable, must be submitted within 30 days of substantial completion and prior to release of the performance bond or assignment of funds or City survey crews will collect the necessary data and bill against the work order.

BOND RELEASE

The following are required to be collected for the performance bond to be release to the owner:
Punchlist Completion.
Record Drawings
Engineer Certification for Stormwater Facilities

Revised: January 26, 2023

NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED
BY
DATE
FIELD BOOKS

DATE | SCALE
DESIGNED | CHECKED
DRAWN | PROJECT NAME
DRAWING NAME

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS
SITE AND BUILDING DIVISION

THORNE ROAD OFF DOCK CONTAINER YARD
COT RIGHT OF WAY GENERAL NOTES

WO19-0220
GN02
SHEET NO.
SHEET 46 OF 46