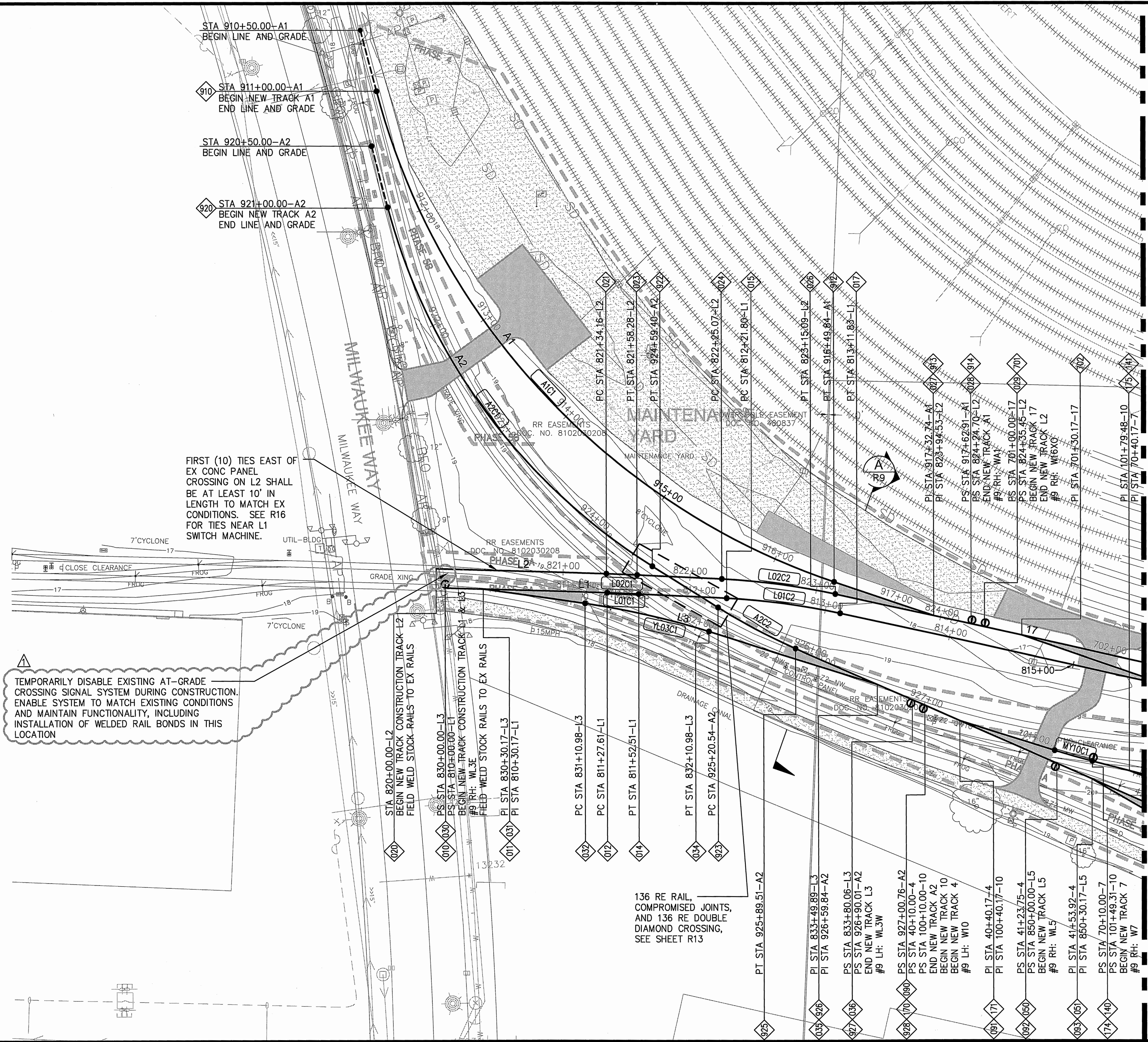




MATCH LINE - SEE SHEET R2

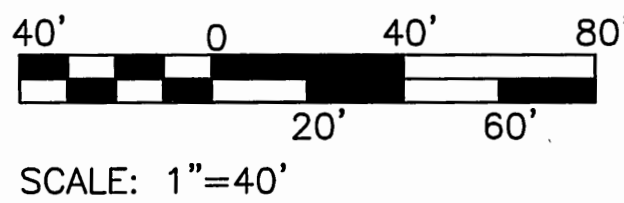
LEGEND:

- NEW TRACK, CENTER LINE, SEE NOTES 6 AND 12
- LINE AND GRADE EXISTING TRACK
- RELAY TRACK WITH SALVAGE RAIL FOR RELAY
- POINT OF SWITCH
- NEW TRACK ALIGNMENT POINT, SEE SHEETS R18-R25
- TRACK HORIZONTAL CURVE
- EXISTING RAIL, TOP OF RAIL
- AIR CONNECTION PIT
- #9 TURNOUT

- NEW ACCESS ROAD
SEE SHEETS C1-C6
- PHASING BOUNDARY
SEE SHEETS G7-G23

NOTES:

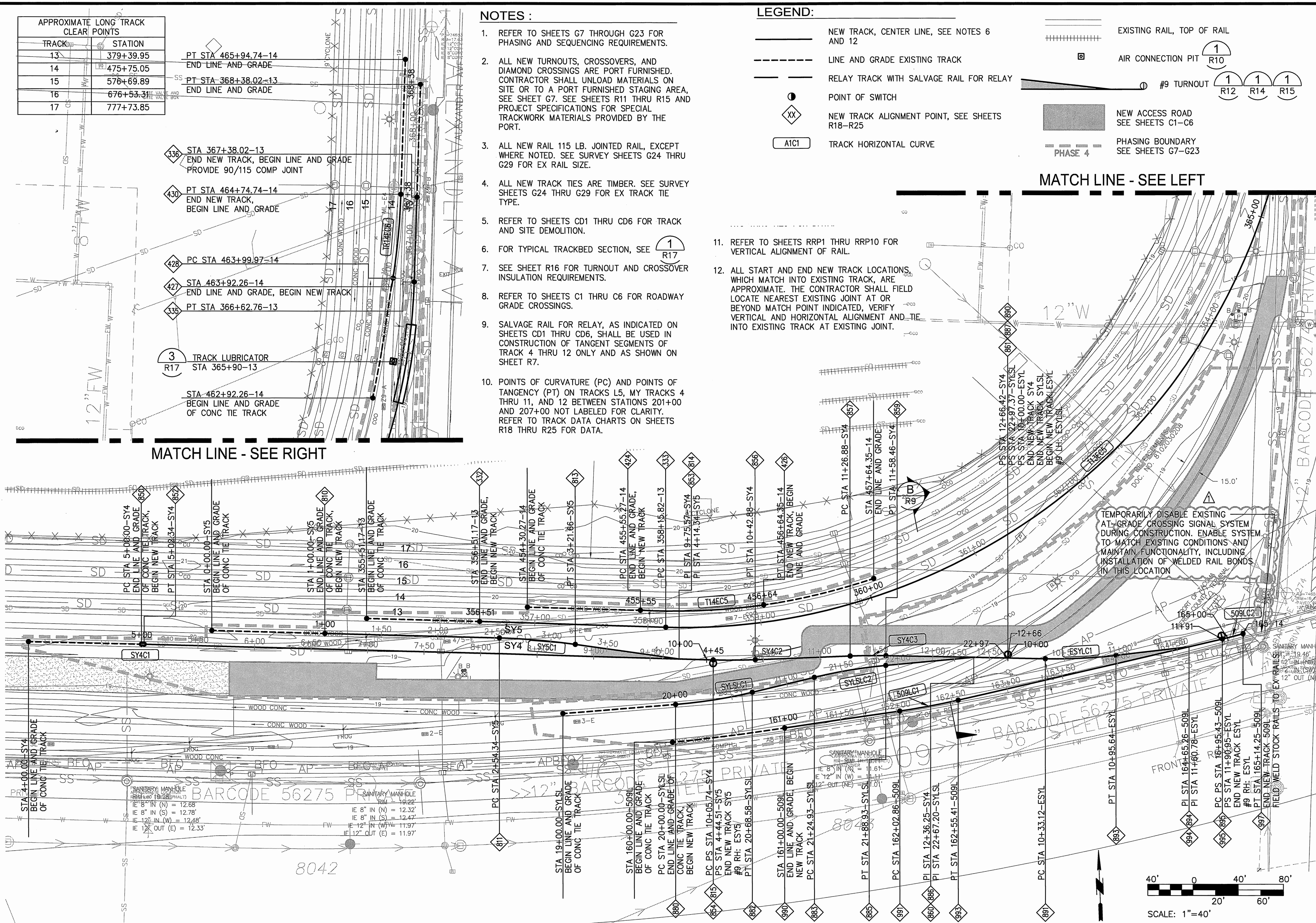
- REFER TO SHEETS G7 THROUGH G23 FOR PHASING AND SEQUENCING REQUIREMENTS.
- ALL NEW TURNOUTS, CROSSOVERS, AND DIAMOND CROSSINGS ARE PORT FURNISHED. CONTRACTOR SHALL UNLOAD MATERIALS ON SITE OR TO A PORT FURNISHED STAGING AREA, SEE SHEET G7. SEE SHEETS R11 THRU R15 AND PROJECT SPECIFICATIONS FOR SPECIAL TRACKWORK MATERIALS PROVIDED BY THE PORT.
- ALL NEW RAIL 115 LB. JOINTED RAIL, EXCEPT WHERE NOTED. SEE SURVEY SHEETS G24 THRU G29 FOR EX RAIL SIZE.
- ALL NEW TRACK TIES ARE TIMBER. SEE SURVEY SHEETS G24 THRU G29 FOR EX TRACK TIE TYPE.
- REFER TO SHEETS CD1 THRU CD6 FOR TRACK AND SITE DEMOLITION.
- FOR TYPICAL TRACKBED SECTION, SEE R17
- SEE SHEET R16 FOR TURNOUT AND CROSSOVER INSULATION REQUIREMENTS.
- REFER TO SHEETS C1 THRU C6 FOR ROADWAY GRADE CROSSINGS.
- SALVAGE RAIL FOR RELAY, AS INDICATED ON SHEETS CD1 THRU CD6, SHALL BE USED IN CONSTRUCTION OF TANGENT SEGMENTS OF TRACK 4 THRU 12 ONLY AND AS SHOWN ON SHEET R7.
- POINTS OF CURVATURE (PC) AND POINTS OF TANGENCY (PT) ON TRACKS L5, MY TRACKS 4 THRU 11, AND 12 BETWEEN STATIONS 201+00 AND 207+00 NOT LABELED FOR CLARITY. REFER TO TRACK DATA CHARTS ON SHEETS R18 THRU R25 FOR DATA.
- REFER TO SHEETS RRP1 THRU RRP10 FOR VERTICAL ALIGNMENT OF RAIL.
- ALL START AND END NEW TRACK LOCATIONS, WHICH MATCH INTO EXISTING TRACK, ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE NEAREST EXISTING JOINT AT OR BEYOND MATCH POINT INDICATED, VERIFY VERTICAL AND HORIZONTAL ALIGNMENT AND TIE INTO EXISTING TRACK AT EXISTING JOINT.



6555 R1 SHEET 56 OF 134	NORTH LEAD WEST END - AREA 1 RAIL PLAN				APPROVED: <i>[Signature]</i> SWK 03/17/16	2407 North 31st Street, Suite 100 Tacoma, WA 98401 (253) 396-0150 Fax (253) 396-0162	Port of Tacoma
	CONTRACTOR: 070164 M. ID: 092938 PHASE: BID	TOWNSHIP: 20N RANGE: 03E DATE: 092938	SECTION: 1, 2, 3 VERT: PORT OF TACOMA BM #846	DIRECTOR ENG. DATE: 5-4-16 PRINTED BY: bosterhaus May 03, 2016 PORT ADDRESS: ONE SITCUM PLAZA	SWK 03/17/16 PROJ. ENGR. DATE TACOMA, WA 98401-1837	DATE: 05/03/16 BY: RLO APP: SWK MARK: 1 REVISION: #2 ADDENDUM	

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APPROXIMATE LONG TRACK CLEAR POINTS	
TRACK	STATION
13	379+39.95
14	475+75.05
15	576+69.89
16	676+53.31
17	777+73.85



NOTES :

1. REFER TO SHEETS G7 THROUGH G23 FOR PHASING AND SEQUENCING REQUIREMENTS.
2. ALL NEW TURNOUTS, CROSSOVERS, AND DIAMOND CROSSINGS ARE PORT FURNISHED. CONTRACTOR SHALL UNLOAD MATERIALS ON SITE OR TO A PORT FURNISHED STAGING AREA, SEE SHEET G7. SEE SHEETS R11 THRU R15 AND PROJECT SPECIFICATIONS FOR SPECIAL TRACKWORK MATERIALS PROVIDED BY THE PORT.
3. ALL NEW RAIL 115 LB. JOINTED RAIL, EXCEPT WHERE NOTED. SEE SURVEY SHEETS G24 THRU G29 FOR EX RAIL SIZE.
4. ALL NEW TRACK TIES ARE TIMBER. SEE SURVEY SHEETS G24 THRU G29 FOR EX TRACK TIE TYPE.
5. REFER TO SHEETS CD1 THRU CD6 FOR TRACK AND SITE DEMOLITION.
6. FOR TYPICAL TRACKBED SECTION, SEE R17
7. SEE SHEET R16 FOR TURNOUT AND CROSSOVER INSULATION REQUIREMENTS.
8. REFER TO SHEETS C1 THRU C6 FOR ROADWAY GRADE CROSSINGS.
9. SALVAGE RAIL FOR RELAY, AS INDICATED ON SHEETS CD1 THRU CD6, SHALL BE USED IN CONSTRUCTION OF TANGENT SEGMENTS OF TRACK 4 THRU 12 ONLY AND AS SHOWN ON SHEET R7.
10. POINTS OF CURVATURE (PC) AND POINTS OF TANGENCY (PT) ON TRACKS L5, MY TRACKS 4 THRU 11, AND 12 BETWEEN STATIONS 201+00 AND 207+00 NOT LABELED FOR CLARITY. REFER TO TRACK DATA CHARTS ON SHEETS R18 THRU R25 FOR DATA.

LEGEND:

- NEW TRACK, CENTER LINE, SEE NOTES 6 AND 12
- LINE AND GRADE EXISTING TRACK
- RELAY TRACK WITH SALVAGE RAIL FOR RELAY
- POINT OF SWITCH
- NEW TRACK ALIGNMENT POINT, SEE SHEETS R18-R25
- TRACK HORIZONTAL CURVE

- EXISTING RAIL, TOP OF RAIL
- AIR CONNECTION PIT
- #9 TURNOUT
- NEW ACCESS ROAD SEE SHEETS C1-C6
- PHASING BOUNDARY SEE SHEETS G7-G23

11. REFER TO SHEETS RRP1 THRU RRP10 FOR VERTICAL ALIGNMENT OF RAIL.
12. ALL START AND END NEW TRACK LOCATIONS, WHICH MATCH INTO EXISTING TRACK, ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE NEAREST EXISTING JOINT AT OR BEYOND MATCH POINT INDICATED, VERIFY VERTICAL AND HORIZONTAL ALIGNMENT AND TIE INTO EXISTING TRACK AT EXISTING JOINT.

6555
R6
SHEET 61 OF 134

CONTR/CONS: 070164
M. ID: 092938
PHASE: BID

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P.O. BOX 187 TACOMA, WA 98402 (206) 388-5841

APPROVED: *[Signature]*
S-4-16

DATE: 03/17/16

REVISION: 1
ADDENDUM #2

BY: RLO
DATE: 05/03/16

North Lead
EAST END - AREA 6
RAIL PLAN

RANGE: 0.3F
TOWNSHIP: 20N
DAT-HRZ: W83-SF
PARCEL: MULTIPLE

SECTION: 1, 2, 3
VERT: PORT OF TACOMA
DRAWING SCALE: AS NOTED

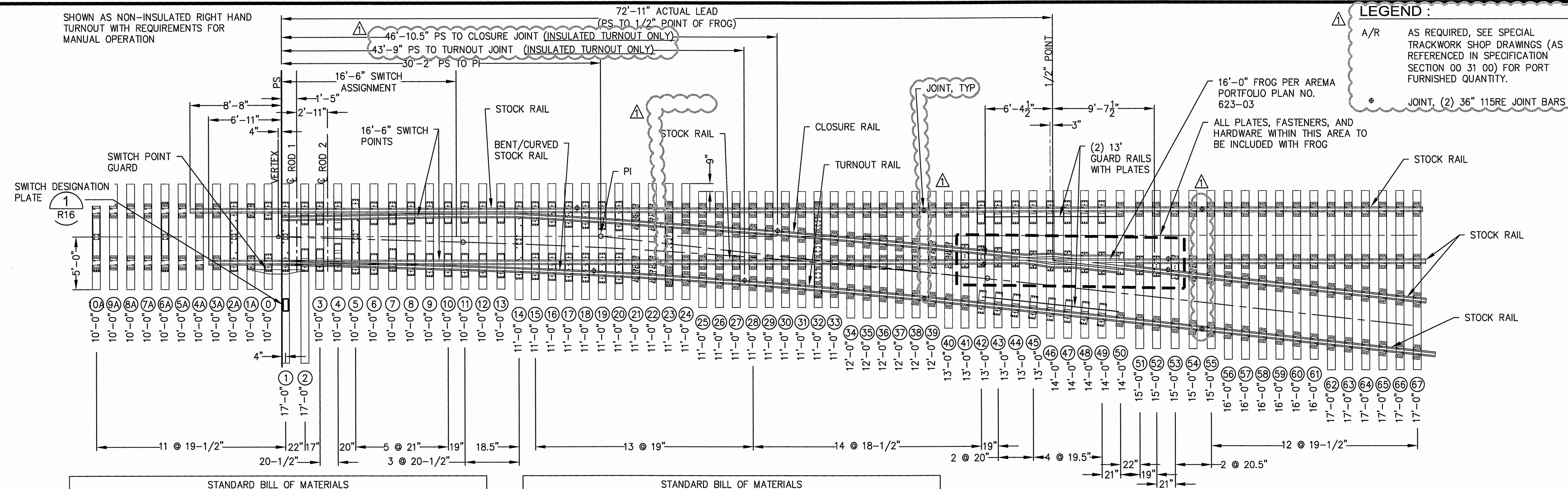
PRINTED BY: bosterhaus May 03, 2016
PORT ADDRESS: ONE SITUM PLAZA
TACOMA, WA 98401-1837

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BINDING EDGE

PORT OF TACOMA FILE: C:\Users\rebekah\AppData\Local\Temp\AcPublish_154281092938-R12

SHOWN AS NON-INSULATED RIGHT HAND
TURNOUT WITH REQUIREMENTS FOR
MANUAL OPERATION



LEGEND :

A/R

AS REQUIRED, SEE SPECIAL
TRACKWORK SHOP DRAWINGS (AS
REFERENCED IN SPECIFICATION
SECTION 00 31 00) FOR PORT
FURNISHED QUANTITY.

JOINT, (2) 36" 115RE JOINT BARS

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
2	16'-6" KNIFE POINT SWITCH POINTS (AREA DETAIL 6100)		
1	SWITCH ROD #1		241600
1	SWITCH ROD #2		241600
2	GAGE PLATE AHEAD OF POINT	TIES 6A & 10A	241304
1	ADJUSTABLE BRACE GAGE PLATE	TIE 2A	241301
2	TIE PLATE	TIE 1A	241307
1	ADJUSTABLE BRACE GAGE PLATE	TIE 1	241300
2	ADJUSTABLE BRACE GAGE PLATE	TIES 5 & 9	241305
2	PLATE	TIE 0	241306
6	ADJUSTABLE BRACE SLIDE PLATE	TIES 2, 3, & 7	241306
2	SLIDE PLATE	TIE 6	241306
2	RISER SLIDE PLATE	TIE 8	243309
2	RISER SLIDE PLATE	TIE 10	241306
18	TURNOUT PLATE	TIES 11, 12, 13, 15, 16, 17, 18, 19, & 20	241307
1	GAGE PLATE	TIE 14	241311
1	GAGE PLATE	TIE 23	241312
1	GAGE PLATE	TIE 32	241313
1	CLOSURE INSULATED JOINT RAIL		341001
1	INSULATED JOINT TURNOUT RAIL		341001
A/R	INSULATED JOINT CLIP ASSEMBLY		132800
1	CLOSURE RAIL		341001
1	TURNOUT RAIL		341001

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
A/R	115 RE RAIL		N/A
A/R	PANDROL TIE PLATES	SEE NOTE 1	263000
14	MODIFIED PANDROL TIE PLATE	TIES 21, 22, 39, 40, & 54	263001
A/R	PANDROL ECLIP E-2055		132500
A/R	15/16" DIA. X 6 1/2" LG. SCREW SPIKES		130800
2	FIXED HEEL BLOCKS		
1	NO. 9 16'-0" AREMA RBM FROG PER AREMA PORTFOLIO PLAN NO. 623-03 WITH SCREW SPIKE PLATES AND ELASTIC FASTENERS		N/A
2	GUARD RAILS PER AREMA PORTFOLIO PLAN NO. 504-03 (13') WITH SCREW PLATES AND ELASTIC FASTENERS		N/A
1	SWITCH POINT GUARD. A&K RAILROAD MATERIALS MODEL U69, OR APPROVED EQUAL		N/A
1	SWITCH STAND, RACOR MODEL 22-E		N/A
20	115RE 36" JOINT BARS		
22	7" X 9" X 10'-0" TIE	TIES 0-10A & 3-13	
20	7" X 9" X 11'-0" TIE	TIES 14-33	
6	7" X 9" X 12'-0" TIE	TIES 34-39	
6	7" X 9" X 13'-0" TIE	TIES 40-45	
5	7" X 9" X 14'-0" TIE	TIES 46-50	
5	7" X 9" X 15'-0" TIE	TIES 51-55	
6	7" X 9" X 16'-0" TIE	TIES 56-61	
8	7" X 9" X 17'-0" TIE	TIES 1-2 & 62-67	

FROG DATA	
ANGLE	6°-21'-35"
TURNOUT DATA	
RADIUS OF CENTERLINE	614'
T =	24.59'
CENTRAL ANGLE - CLOSURE CURVE	4°-35'-13"
DEGREE OF CURVE	9°-20'-31"
DIMENSIONS ALONG TURNOUT	
VERTEX TO PC	17'-7 9/32"
PC TO PT	614'-0" $\frac{1}{2}$ RADIUS
PT TO FROG POINT	6'-4 1/2"

SWITCH DATA		
TURNOUT POINT	SWITCH LENGTH	16'-6"
	HEEL SPREAD	6 1/4"
	HEEL ANGLE	1°-46'-22"
	SWITCH ANGLE	1°-46'-22"
	THROW AT ROD #1	4 3/4"
	THICKNESS AT POINT	0"
TURNOUT POINT	RADIUS (CLOSURE CURVE)	616.3542'
	VERTEX DISTANCE	7 4/16"

- NOTES :
- PANDROL TIE PLATES AND RESILIENT FASTENERS SHALL BE USED AT ALL LOCATIONS UNLESS OTHERWISE NOTED, SEE DETAIL 2 ON SHEET R11.
 - SWITCH POINTS SHALL HAVE MANGANESE TIPS (AREA 220).
 - KNIFE POINT SWITCH POINTS SHALL BE HEAD HARDENED AND DOUBLE REINFORCED PER AREA DETAIL 6100 WITH TRANSIT STYLE CLIPS.
 - TURNOUTS SHALL HAVE HORIZONTAL SWITCH RODS.
 - FROG SHALL BE HIGH INTEGRITY, EXPLOSION HARDENED, RAIL BOUND MANGANESE STEEL CASTING WITH MITERED HEEL AND EXTENDED HEEL AND WING RAILS.
 - THE GUARD RAIL IS TO BE 54-5/8" FROM THE GAUGE SIDE OF THE FROG POINT TO THE STRAIGHT GUARDING FACE OF THE GUARD RAIL.
 - NO ALLOWANCE HAS BEEN MADE FOR EXPANSION GAPS OR END POST IN COMPUTING RAIL LENGTHS SHOWN.
 - FRACTIONAL RAIL LENGTH CUTTINGS SHOWN ARE THEORETICAL AND ARE SUBJECT TO MINOR ADJUSTMENT TO MEET ACTUAL CLOSURE REQUIREMENTS IN THE FIELD.
 - ALL SWITCH RODS AND GAUGE PLATES ARE TO BE INSULATED TYPES.
 - STOCK RAILS ARE TO BE BENT IN THE MILL OR IN THE SHOP.
 - A MINIMUM 1" GAP MUST BE MAINTAINED BETWEEN THE ENDS OF METAL TIE PLATES LOCATED BEYOND THE CLOSURE AREA OF INSULATED JOINTS IN ORDER TO PROVIDE PROPER TRACK CIRCUIT PROTECTION.
 - ACTUAL TURNOUT DATA, TURNOUT OFFSETS, RAIL LENGTHS, AND SWITCH TIE LENGTHS MAY VARY ON MANUFACTURER'S SHOP DRAWINGS.
 - CHORD METHOD IS USED TO CALCULATE TURNOUT CURVE DATA AND OFFSETS.

NOTE: SEE PROJECT SPECIFICATIONS FOR SPECIAL
TRACKWORK MATERIALS PROVIDED BY THE PORT.
ALL ITEMS NOT INCLUDED IN SPECIAL TRACKWORK
SHOP DRAWINGS (SEE SPECIFICATION SECTION 00
31 00) SHALL BE PROVIDED BY THE CONTRACTOR.

6555

R12

SHEET 67 OF 134

CONTRACT/CONS: 070164

M. ID: 092938

PHASE: BID

NORTH LEAD

NO. 9 TURNOUT PLAN

APPROVED:

SWK

03/17/16

CHECKED BY:

SWK

03/17/16

DATE

DIRECTOR ENGR. DATE

5-4-16

03/17/16

PRINTED BY:

bosterhaus May 03, 2016

PORT ADDRESS: ONE SITCOM PLAZA

SECTION: 1, 2, 3

RANGE: 03E

TOWNSHIP: 20N

DAT-HRZ: W83-SF

VERT: PORT OF TACOMA, BM #846

PARCEL: MULTIPLE

DRAWING SCALE: AS NOTED

TACOMA, WA 98401-1837

AS NOTED

2407 North 31st Street, Suite 100

Tacoma, Washington 98407

(253) 396-0150 Fax (253) 396-0162

Port of Tacoma

Port of Tacoma

Port of Tacoma

DATE: 05/03/16

BY: RLO

APPR: SWK

REVISION: #2

MARK: 1

ADDENDUM

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29' 30' DOUBLE DIAMOND CROSSING - BILL OF MATERIALS	
QTY	DESCRIPTION
4	MANGANESE STEEL INSERT CROSSING CENTER FROG FOR 29' 30' CROSSING ANGLE, WITH DEPTH HARDENING AND FLARED GUARDS PER AREMA PORTFOLIO PLAN NOS. 750-10 & 757-02
4	MANGANESE STEEL INSERT CROSSING END FROG FOR 29' 30' CROSSING ANGLE, WITH DEPTH HARDENING AND FLARED GUARDS PER AREMA PORTFOLIO PLAN NOS. 750-10 & 757-02
8 PR	FROG JOINT BARS
6	FLARED CENTER FROG GUARDS, PER AREMA PORTFOLIO PLAN BASIC NO. 350
6	FLARED END FROG GUARDS, PER AREMA PORTFOLIO PLAN BASIC NO. 350
A/R	INTERTRACK RUNNING RAIL AND GUARD RAIL
A/R	ARM RUNNING RAIL AND JOINT BARS, PER AREMA PORTFOLIO PLAN BASIC NO. 757-02
A/R	FLANGWAY FILLERS AND SPACER BLOCKS
A/R	TRACK BOLTS AND TRACK BOLT NUTS
A/R	SPECIAL PLATES WITH PANDROL CLIPS, SEE NOTES 8, 9, AND 12

29' 30' DOUBLE DIAMOND CROSSING - BILL OF TIMBER TIES	
QTY	DESCRIPTION
2	7" X 9" X 8'-6" TIE
6	7" X 9" X 9'-0" TIE
24	7" X 9" X 10'-0" TIE
10	7" X 9" X 11'-0" TIE
12	7" X 9" X 13'-0" TIE
8	7" X 9" X 15'-0" TIE
8	7" X 9" X 16'-0" TIE

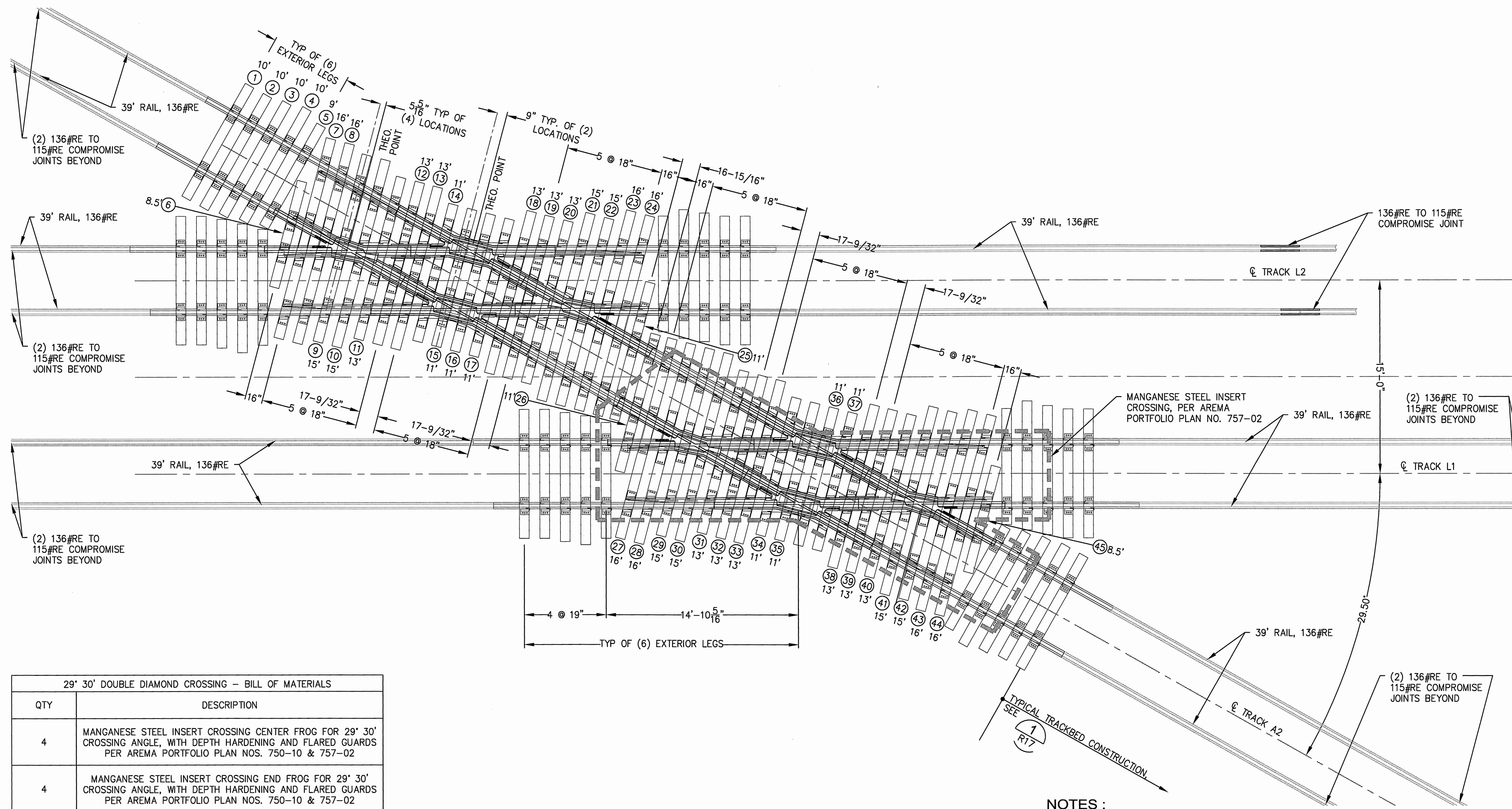
1 DOUBLE DIAMOND CROSSING

SCALE: 1"=4'

NOTE: SEE PROJECT SPECIFICATIONS FOR SPECIAL TRACKWORK MATERIALS PROVIDED BY THE PORT. ALL ITEMS NOT INCLUDED IN SPECIAL TRACKWORK SHOP DRAWINGS (SEE SPECIFICATION SECTION 00 31 00) SHALL BE PROVIDED BY THE CONTRACTOR.

NOTES :

- CROSSINGS SHALL CONFORM TO AREA PORTFOLIO PLAN 757-02.
- RAIL AND COMPONENTS SHALL CONFORM TO 136 RE RAIL SECTION.
- RAIL DRILLINGS, BAR PUNCHINGS, OVAL NECK TRACK BOLTS AND TRACK BOLT NUTS SHALL BE IN ACCORDANCE WITH AREMA MANUAL, VOL. 1, CHAPTER 4, SECTION 3.3 THROUGH SECTION 3.5 FOR 36", 6 HOLE JOINT BAR, 136 RE RAIL SECTION.
- IMPACT AREAS SHALL BE DEPTH HARDENED IN ACCORDANCE WITH AREMA PORTFOLIO PLAN NO. 771-02.
- GUARDING OF INTERTRACK CONNECTION SHALL BE CONTINUOUS, FLARED GUARDS SHALL BE PROVIDED FOR EXTERNAL ARMS.
- RUNNING RAIL SHALL BE FURNISHED BETWEEN CROSSINGS.
- LOCATE INTERTRACK JOINT APPROXIMATELY AT THE MIDPOINT BETWEEN CROSSINGS.
- ALL SPECIAL PLATES SHALL BE 1 1/4" THICK WITH 1/4" DEEP MILL SEAT AND NO RAIL CANT.
- MULTI-TIE PLATES SHALL BE USED UNDER ALL CASTING AREAS.
- FLANGWAY FILLER SHALL BE OF ROLLED STEEL, PER AREMA PORTFOLIO PLAN BASIC NO. 325 AND SHALL MAINTAIN THE REQUIRED FLANGWAY THROUGHOUT. SPACER BLOCKS MAY BE OF CAST IRON.
- GAGES AND WIDTHS OF FLANGWAYS FOR TANGENT TRACK PER AREMA PORTFOLIO PLAN BASIC NO. 790. FOR PERMISSIBLE VARIATIONS IN MANUFACTURE SEE AREMA PORTFOLIO PLAN BASIC NO. 100, SECTION 7.
- PANDROL TIE PLATES SHALL BE USED AT ALL LOCATIONS NOT OTHERWISE MENTIONED, SEE DETAIL 5 ON SHEET R11.



6555

R13

SHEET 68 OF 134

CONT/CONS: 070164

M. ID: 092938

PHASE: BID

NORTH LEAD

DOUBLE DIAMOND CROSSING

APPROVED: *[Signature]* SWK 03/17/16

CHECKED BY: DATE

SWK 03/17/16

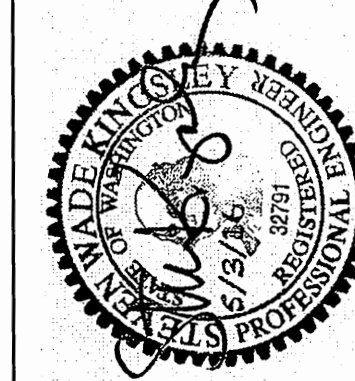
DIRECTOR ENG. DATE

PROJ. ENGR DATE

PRINTED BY: bosterhaus May 03, 2016

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA, WA 98401-1837



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Tacoma, Washington 98403
(253) 396-0350 Fax (253) 396-0352Port of Tacoma
P.O. BOX 487 TACOMA, WA 98402-0487

MARK: 1

REVISION: #2

BY: RLO

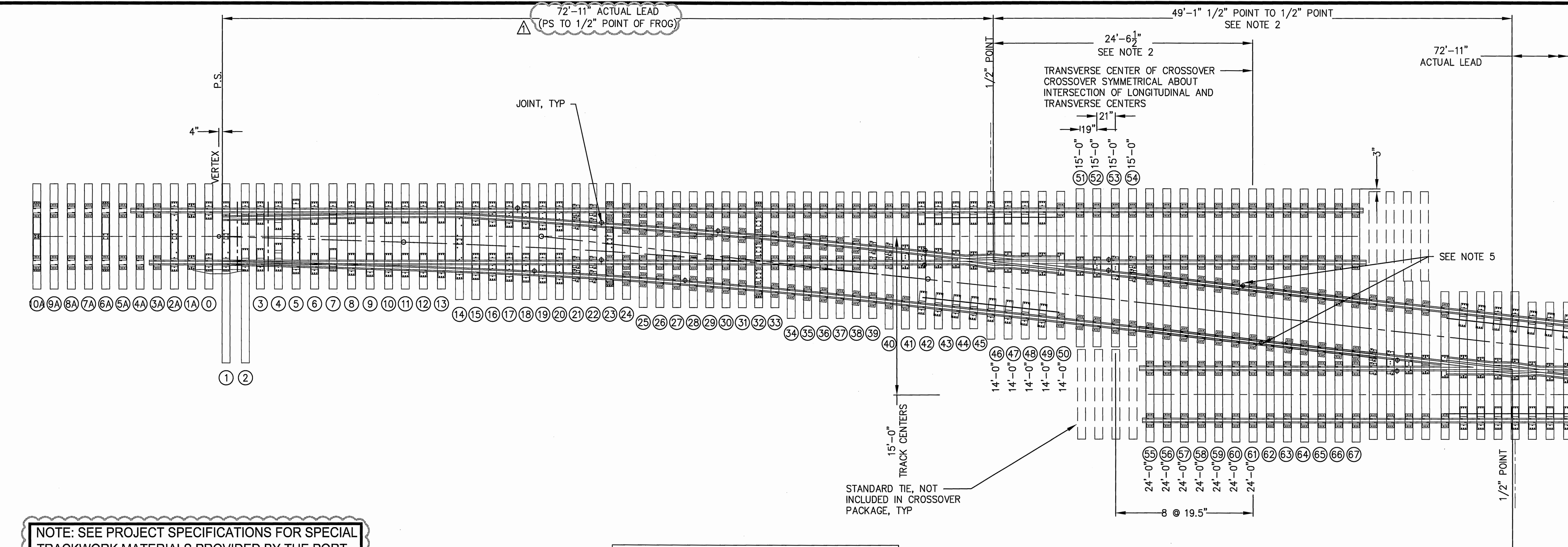
DATE: 05/03/16

APP: SWK

DATE: 05/03/16

ADDENDUM #2

WITHOUT WRITTEN PERMISSION



NOTE: SEE PROJECT SPECIFICATIONS FOR SPECIAL TRACKWORK MATERIALS PROVIDED BY THE PORT. ALL ITEMS NOT INCLUDED IN SPECIAL TRACKWORK SHOP DRAWINGS (SEE SPECIFICATION SECTION 00 31 00) SHALL BE PROVIDED BY THE CONTRACTOR.

TABLE 1 - TIE DATA FOR CROSSOVER WITH 14'-0" TRACK CENTERS		
TIE	SIZE	SPACING
45	7" X 9" X 13'-0"	19 1/2"
46	7" X 9" X 14'-0"	19 1/2"
47	7" X 9" X 14'-0"	19 1/2"
48	7" X 9" X 14'-0"	19 1/2"
49	7" X 9" X 23'-0"	21"
50	7" X 9" X 23'-0"	22"
51	7" X 9" X 23'-0"	19"
52	7" X 9" X 23'-0"	21"
53	7" X 9" X 23'-0"	18 1/2"
54	7" X 9" X 23'-0"	18 1/2"
55	7" X 9" X 23'-0"	18 1/2"
56	7" X 9" X 23'-0"	18 1/2"
57	7" X 9" X 23'-0"	18 1/2"
58	7" X 9" X 23'-0"	18 1/2"

- NOTES :
- RIGHT HAND TO RIGHT HAND TURNOUT IS SHOWN WITH 15'-0" TRACK CENTERS. SEE TABLE 1 FOR TIE SIZES AND SPACING FOR CROSSOVER WITH 14'-0" TRACK CENTERS.
 - FOR CROSSOVER WITH 14'-0" TRACK CENTERS THE LINE OF SYMMETRY IS ABOUT THE CENTERLINE BETWEEN TIE 58 AND TIE 59 WITH THE FOLLOWING DIMENSIONS:
1/2" POINT TO 1/2" POINT = 40'-1 5/6"
1/2" TO LINE OF SYMMETRY = 20'-2 2/3"
SEE TABLE 1 FOR TIE SIZES AND SPACING FOR CROSSOVER WITH 14'-0" TRACK CENTERS.
 - FOR TURNOUT DATA AND NOTES SEE SHEET R12.
 - SEE TURNOUT DETAIL ON SHEET R12 FOR SIZE AND SPACING OF TIES 10A - 45.
 - LOCATE JOINT APPROXIMATELY AT THE MIDPOINT OF THE CROSSOVER.

1
R1-R6
DETAIL - NO. 9 CROSSOVER
SCALE: 1"=5'

6555
R14
SHEET 69 OF 134

CONT/CONS: 070164
M. ID: 092938
PHASE: BID

NORTH LEAD
NO. 9 CROSSOVER PLAN

TOWNSHIP: 20N
RANGE: 03E
SECTION: 1, 2, 3
DATE-HRZ: W83-SF
PARCEL: MULTIPLE

VERT: PORT OF TACOMA BM #846
DRAWING SCALE: AS NOTED

APPROVED: *[Signature]*
DIRECTOR
5-4-16

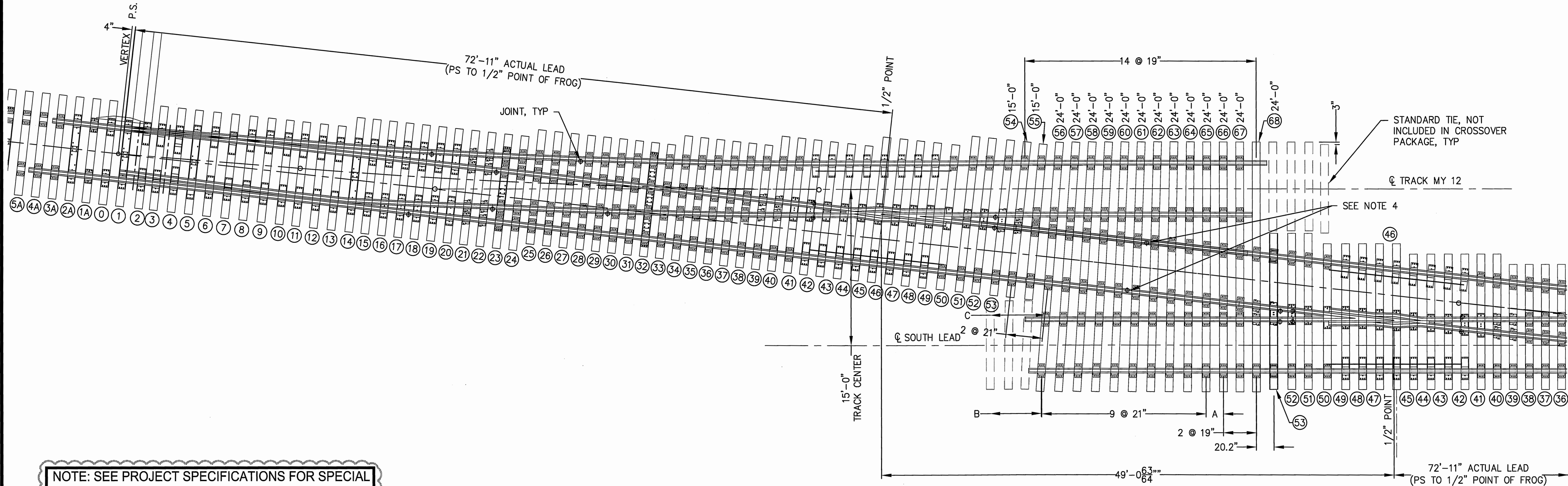
DATE: 03/17/16
PROJ. ENGR. DATE: 03/17/16
PRINTED BY: bostertaus May 03, 2016
PORT ADDRESS: ONE SITCOM PLAZA
TACOMA, WA 98401-1837

Port of Tacoma
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(253) 396-0150 Fax (253) 396-0162
P.O. BOX 187 TACOMA, WA 98401 (253) 396-5841

kpff
KING COUNTY PROFESSIONAL ENGINEERS
5/2/16
REGISTERED PROFESSIONAL ENGINEER
NO. 123456

MARK: 1
REVISION: ADDENDUM #2
BY: RLO
DATE: 05/03/16

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NOTE: SEE PROJECT SPECIFICATIONS FOR SPECIAL TRACKWORK MATERIALS PROVIDED BY THE PORT. ALL ITEMS NOT INCLUDED IN SPECIAL TRACKWORK SHOP DRAWINGS (SEE SPECIFICATION SECTION 00 31 00) SHALL BE PROVIDED BY THE CONTRACTOR.

NOTES :

1. ADDITIONAL DIMENSIONS:
 - 1.1. A IS EQUAL TO SPACING REQUIRED TO POSITION TIE 66 NORMAL TO SOUTH LEAD TRACK CENTERLINE.
 - 1.2. B IS EQUAL A MINIMUM SPACING OF 19.5" UNTIL TIES ARE NORMAL TO SOUTH LEAD.
 - 1.3. C IS EQUAL TO A MAXIMUM SPACING OF 21.5" UNTIL TIES ARE NORMAL TO SOUTH LEAD.
2. FOR TURNOUT DATA AND NOTES SEE SHEET R12.
3. SEE TURNOUT DETAIL ON SHEET R11 FOR SIZE AND SPACING OF TIES 10A - 53.
4. LOCATE JOINT APPROXIMATELY AT THE MIDPOINT OF THE CROSSOVER.

DETAIL - NO. 9 CROSSOVER
RIGHT HAND-LEFT HAND

SCALE: 1"=5'

6555

R15

SHEET 70 OF 134

CONT/CONS: 070164

M. ID: 092938

PHASE: BID

NORTH LEAD

NO. 9 CROSSOVER PLAN
RIGHT HAND-LEFT HAND

TOWNSHIP: 20N

DAT-HRZ: W83-SF

PARCEL: MULTIPLE

RANGE: 03E

VERT: PORT OF TACOMA BM #846

SECTION: 1, 2, 3

DRAWING SCALE: AS NOTED

APPROVED:

5-4-16

DIRECTOR ENG. DATE

PRINTED BY: bosterhaus May 03, 2016

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA, WA 98401-1837

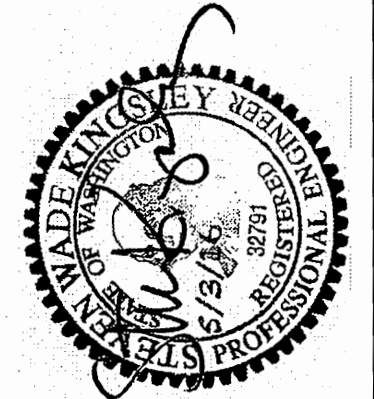
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DATE



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(253) 396-0150 Fax (253) 396-0152

Port of Tacoma
P.O. BOX 487 TACOMA, WA 98401 (203)355-0441

MARK: 1

REVISION: #2

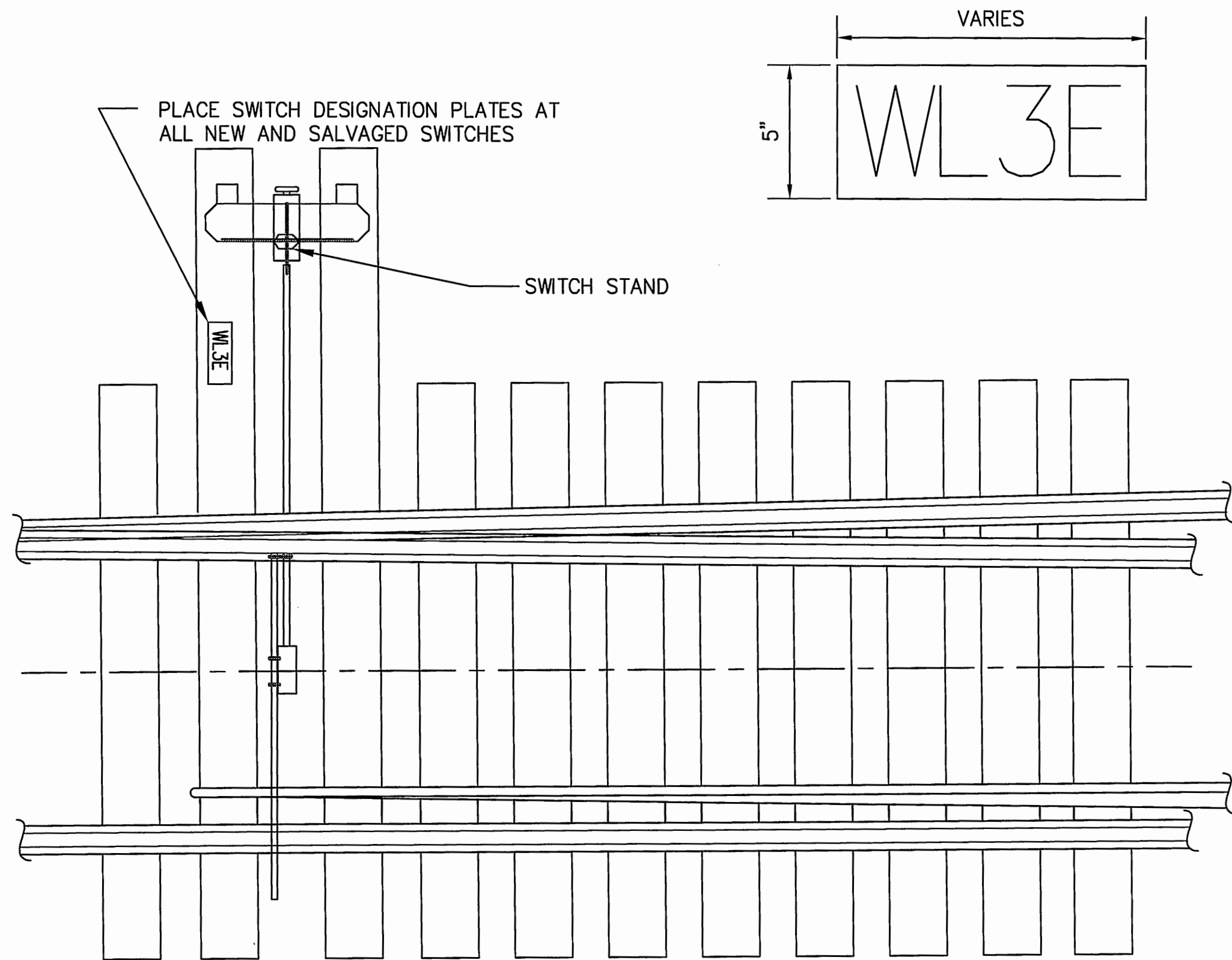
BY: RLO

APPR: SWK

DATE: 05/03/16

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TURNOUT AND CROSSOVER SCHEDULE						
	SWITCH NAME	DIRECTION	MATERIAL ORIGIN	INSULATION REQUIREMENT	PORT PROVIDED MATERIALS DELIVERY PACKAGE	NOTES
1	ECOB	LH	PORT PROVIDED	NO	1	
2	ESYL	RH	PORT PROVIDED	YES	2	
3	ESY5	RH	SALVAGED: E1	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, SEE NOTE 2
4	ESYSL	LH	PORT PROVIDED	YES	2	
5	E10	LH	PORT PROVIDED	NO	1	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
6	E11	LH	PORT PROVIDED	NO	1	
7	WSYLE	LH	PORT PROVIDED	NO	1	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
8	WSYLW	LH	PORT PROVIDED	NO	1	CONTRACTOR SHALL PROVIDE 24’–0” TIMBER TIES FOR TIES 57– 67 AND INSTALL TO SUPPORT ADJACENT TRACK SY5
9	ESLXOE	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
10	ESLXOW	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING
11	E14XOE	LH	PORT PROVIDED	NO	1	14’ CROSSOVER TRACK SPACING
12	E15XOE	LH	PORT PROVIDED	NO	1	14’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
13	E13XO	LH	PORT PROVIDED	NO	1	14’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
14	E16XOE	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING
15	E14XOW	LH	PORT PROVIDED	NO	1	14’ CROSSOVER TRACK SPACING
16	E17XOE–1	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING
17	E17XOE–2	LH	SALVAGED: M4	NO	N/A	14’ CROSSOVER TRACK SPACING, CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 CROSSOVER, SEE SHEET R14, SEE NOTE 2
18	E15XOW	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING
19	E16XOW–1	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING
20	E16XOW–2	LH	SALVAGED: M5	NO	N/A	14’ CROSSOVER TRACK SPACING, CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 CROSSOVER, SEE SHEET R14, SEE NOTE 2
21	E12XOE	LH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
22	E12XOW	RH	PORT PROVIDED	NO	1	15’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
23	ESNK	LH	PORT PROVIDED	NO	1	
24	W11	LH	PORT PROVIDED	NO	3	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
25	W12	LH	PORT PROVIDED	NO	3	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
26	W13	RH	PORT PROVIDED	NO	2	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
27	W14	LH	PORT PROVIDED	NO	3	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
28	W15	LH	PORT PROVIDED	NO	3	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
29	W17XO	RH	PORT PROVIDED	YES	2	14’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
30	W16XO	RH	PORT PROVIDED	YES	2	14’ CROSSOVER TRACK SPACING, ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
31	W10	LH	PORT PROVIDED	YES	3	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
32	W5	LH	SALVAGED: M2	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, ALL TIES AHEAD OF PS MAY NOT BE REQUIRED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 2
33	W6	LH	SALVAGED: WEST 8	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, ALL TIES AHEAD OF PS MAY NOT BE REQUIRED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 2
34	W7	RH	PORT PROVIDED	NO	3	
35	W8	LH	SALVAGED: WEST 9	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, ALL TIES AHEAD OF PS MAY NOT BE REQUIRED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 2
36	W9	LH	SALVAGED: WEST 10	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, ALL TIES AHEAD OF PS MAY NOT BE REQUIRED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 2
37	WA1	RH	PORT PROVIDED	YES	2	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
38	WL3W	LH	PORT PROVIDED	YES	2	ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 1
39	WL3E	RH	PORT PROVIDED	YES	3	TIES 1 & 2 SHALL BE 24’ IN LENGTH, PROVIDED BY THE CONTRACTOR, AND SHALL EXTEND UNDER ADJACENT TRACK L2. ALL PORT FURNISHED TIES MAY NOT BE USED DUE TO SPACE CONSTRAINT AT MILWAUKEE WAY CROSSING, SEE NOTE 1. CONTRACTOR SHALL PROVIDE FIELD WELDED JOINT BETWEEN STOCK RAILS AND EXISTING RAIL AT MILWAUKEE WAY CROSSING.
40	WL5	RH	SALVAGED: M1	NO	N/A	CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 TURNOUT, SEE SHEET R12, TIES A3 – 10A AHEAD OF PS NOT REQUIRED DUE TO SPACE CONSTRAINT TO ADJACENT TURNOUT, SEE NOTE 2
41	EWORM	LH	PORT PROVIDED	NO	1	
42	W12XO	RH	SALVAGED: M3	NO	N/A	14’ CROSSOVER TRACK SPACING, CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 CROSSOVER, SEE SHEET R14, SEE NOTE 2
43	W13XO	RH	SALVAGED: M6	NO	N/A	14’ CROSSOVER TRACK SPACING, CONTRACTOR SHALL PROVIDE TIE PACKAGE PER DETAIL – NO.9 CROSSOVER, SEE SHEET R14, SEE NOTE 2



NOTES:

- PLATES TO BE SHEET ALUMINUM, MILL FINISH SIMILAR TO ALCOA 61S–T6(61ST). PLATE TO BE 1/8” THICK.
- APPLY 3M SCOTCHLITE HIGH INTENSITY SILVER REFLECTIVE SHEETING, OR APPROVED EQUAL, TO PLATES.
APPLY 3” HIGH LETTERS AND NUMBERS TO SHEETING. LETTERS AND NUMBERS SHALL BE BLACK VINYL, CUT WITH CLEAR LAMINATE UV AND WEATHER PROTECTION MANUFACTURED BY INTERNATIONAL DESIGN & MARKETING, INC., HUNTINGTON BEACH, CA, 800–689–7446 OR APPROVED EQUAL.
- CONTRACTOR SHALL APPLY PLATES TO WOOD TIES USING 3/8” X 2”, 316 SS OR 18–8 SS LAG BOLTS, EACH BOLT 1”± 1/16” FROM BOTH EDGES OF EACH CORNER.



NOTES :

- ALL PORT FURNISHED TIES MADE SURPLUS DUE TO SPACE CONSTRAINTS AT PROPOSED TURNOUT AND CROSSOVER LOCATIONS SHALL BE USED ELSEWHERE IN THE PROJECT BY INCORPORATING INTO THE CONTRACTOR PROVIDED TIE PACKAGE FOR SALVAGE TURNOUTS OR 10’ TIES MAY BE USED AS STANDARD TIMBER TIES EITHER IMMEDIATELY BEFORE OR AFTER PROPOSED TURNOUTS OR CROSSOVERS. FIELD CUTTING OF SURPLUS TIES SHALL NOT BE ALLOWED.
- ALL SWITCH STANDS, SPIKES, PLATES, CLIPS, AND ANCHORS SHALL BE REPLACED WITH NEW MATERIAL ON SALVAGED TURNOUTS. THE CONTRACTOR SHALL INVENTORY ALL SALVAGED TURNOUTS AND REPLACE ALL SPIKES, PLATES, CLIPS, AND ANCHORS IN KIND. SWITCH STANDS SHALL BE REPLACED TO MATCH PORT FURNISHED TURNOUTS, SEE SPECIFICATION SECTION 34.11.23. ALL OTHER MATERIAL FROM SALVAGED TURNOUTS SHALL BE CONSIDERED SUITABLE FOR REINSTALLATION.

6555

R16

SHEET 71 OF 134

CONT/CONS: 070164

M. ID: 092938

PHASE: BID

NORTH LEAD

TURNOUT AND CROSSOVER DETAILS

APPROVED: *Steve Howard*

SWK 03/17/16

CHECKED BY: DATE

SWK 03/17/16

PROJ. ENGR. DATE

5-4-16

DATE

DIRECTOR ENG. DATE

5-4-16

DATE

PRINTED BY: bosterhaus May 03, 2016

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Port of Tacoma

kpff

MADE IN WISCONSIN

REGISTERED PROFESSIONAL ENGINEER

12/13/16

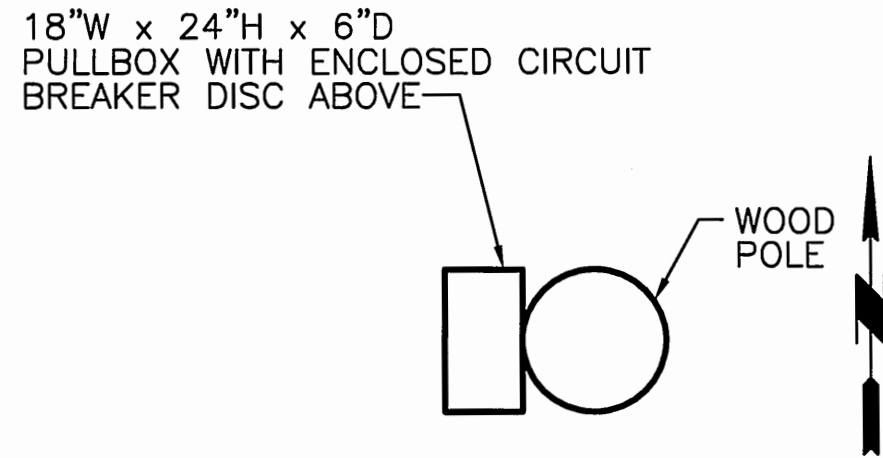
REVISION: #2

BY: RLO

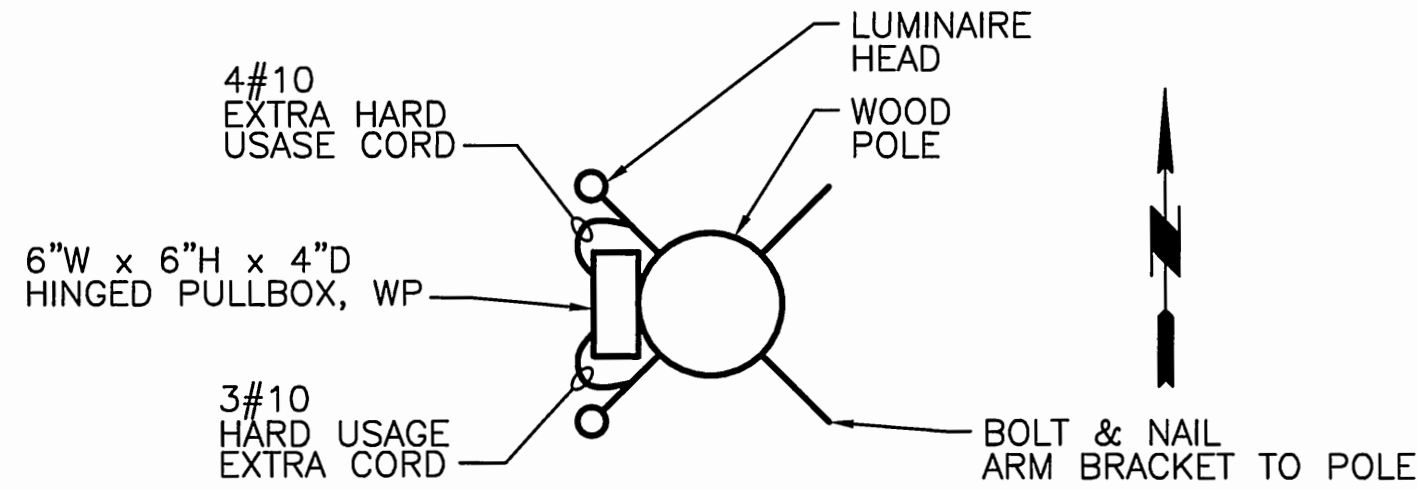
APPR: SWK

DATE: 05/03/16

MARK: 1



1 POLE/PULLBOX ORIENTATION
SCALE: NONE



2 LIGHT POLE UPPER ASSEMBLY DETAIL
SCALE: NONE

NOTE: SEE LUMINAIRE SCHEDULE FOR ORIENTATION & QUANTITY OF HEADS

EXISTING ILLUMINATION POLE SCHEDULE

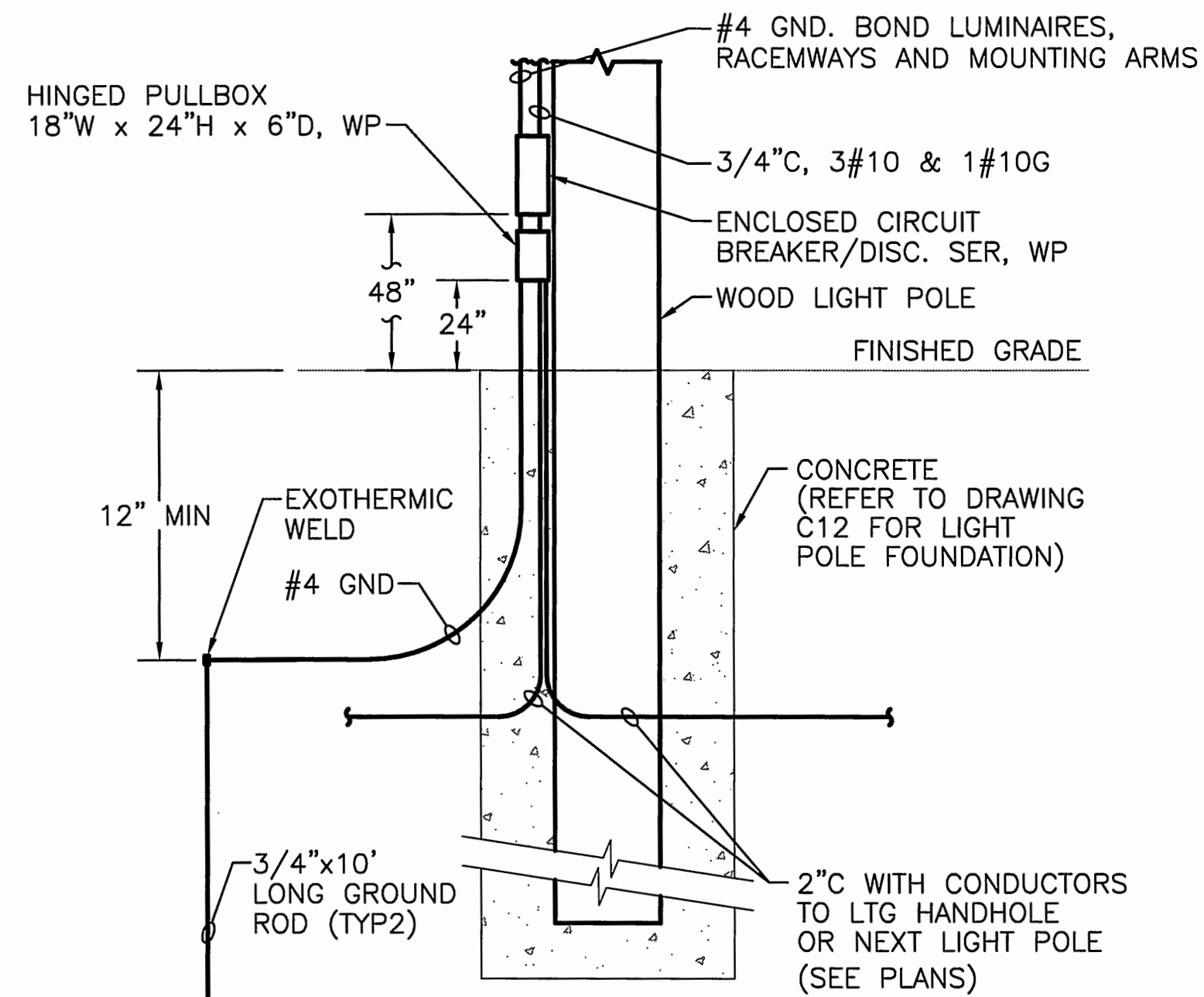
LUMINAIRE NO.	LIGHTING CONTACTOR	WOOD POLE/CLASS HEIGHT ABOVE GRADE	QUANTITY LUMINAIRES	LUMINAIRE VOLTAGE PHASE	WATTAGE TOTAL	POLE DEPTH OF SETTING	ARM "GARMIRE" MODEL #	REMARKS
LP1N	WEST	80/1	(3) 1000W HPS	480V/1P	3300	15'	G-WAG-4	EXISTING
LP2N	WEST	65'/2	(4) 1000W HPS	480V/1P	4400	15'	G-WAG-4	EXISTING
LP3N	WEST	80/1	(4) 1000W HPS	480V/1P	4400	15'	G-WAG-4	EXISTING
LP4N	WEST	80/1	(3) 1000W HPS	480V/1P	4400	15'	G-WAG-4	EXISTING
LP6	POT	65'/2	(1) 1000W HPS	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP7	POT	65'/2	(1) 1000W HPS	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP8	POT	65'/2	(3) 1000W HPS	480V/1P	3300	15'	G-WAG-4	EXISTING
LP9	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP10	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP11	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP12A	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP12B	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP12C	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP12D	POT	65'/2	(2) 1000W HPS	480V/1P	2200	UNKNOWN	G-WAG-4	EXISTING
LP12E	POT	65'/2	(1) 1000W HPS	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP12	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP13	POT	65'/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	G-WAG-4	EXISTING
LP14	POT	65'/2	(1) 1000W HPS	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP15	POT	65'/2	(2) 1000W HPS FL	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP16	POT	65'/2	(1) 1000W HPS	480V/1P	1100	UNKNOWN	UNKNOWN	EXISTING
LP17	POT	80/2	(4) 1000W HPS FL	480V/1P	4400	UNKNOWN	G-WAG-4	EXISTING SALVAGE (2) COBRA HEADS AND ARMS ASSEMBLY.
LP1A	TR	65/2	(2) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP1B	TR	65/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP1	TR	65/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP2	TR	65/2	(5) 1000W HPS	480V/1P	5500	UNKNOWN	UNKOWN	EXISTING
LP3	TR	65/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP4	TR	80/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP4A	TR	80/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING
LP5	TR	65/2	(3) 1000W HPS	480V/1P	3300	UNKNOWN	UNKOWN	EXISTING

NEW ILLUMINATION POLE SCHEDULE

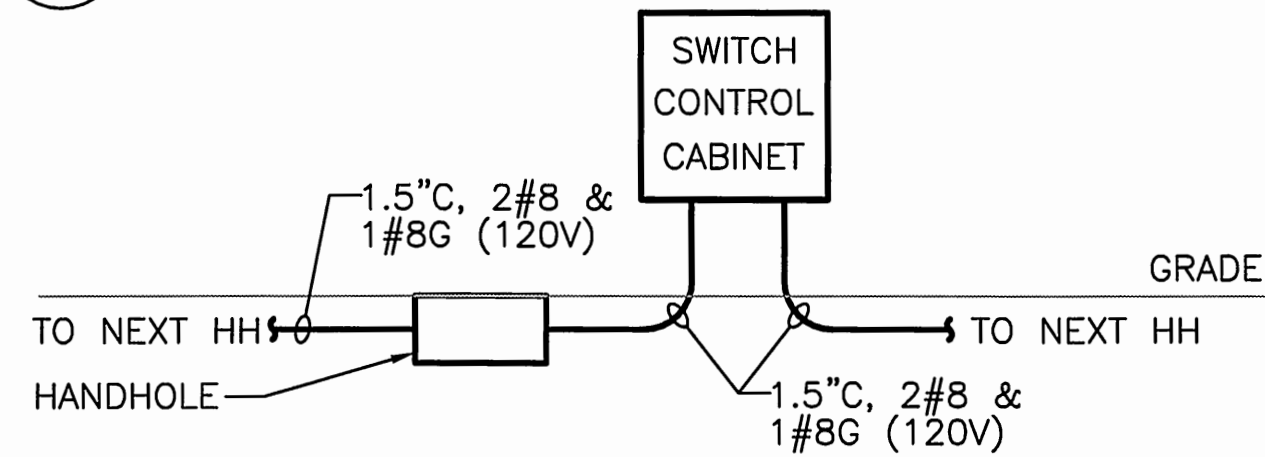
LUMINAIRE NO.	LIGHTING CONTACTOR	WOOD POLE/CLASS HEIGHT ABOVE GRADE	QUANTITY LUMINAIRES	LUMINAIRE VOLTAGE PHASE	SERVICE DISCONNECT	POLE SERVING VOLTAGE PHASE	PHASE LEG CONNECTION	WATTAGE TOTAL	REMARKS
LP1	TACOMA RAIL	65'/2	(3) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	3300	NOTES 1, 2, 3 FACE HEADS NW,SW,SE
LP2	TACOMA RAIL	65'/2	(5) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	5500	NOTES 1, 2, 3, 8 70 DEGREE OFFSET WITH ONE HEAD FACE SOUTH
LP4	TACOMA RAIL	80'/2	(3) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	3300	NOTES 1, 2, 3 FACE HEADS NW,SW,NE
LP5	TACOMA RAIL	65'/2	(3) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	3300	NOTES 1, 2, 3 FACE HEADS NW,SW,SE
LP6	TACOMA RAIL	65'/2	(1) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	3300	NOTES 1, 2, 3 FACE HEAD SOUTH
LP7	TACOMA RAIL	65'/2	(3) 1000W HPS	480V/1P	(1) 20A/3P	480V/3P	A, B, C	3300	NOTES 1, 2, 3 FACE HEADS NW,SW,SE
LP10	PORT OF TACOMA	65'/2	(2) 1000W HPS	480V/1P	(1) 20A/3P	480V/1P	A, B, C	1100	NOTES 1, 2, 3, 7 FACE HEADS NW,SW
LP17	PORT OF TACOMA	80'/2	(4) 1000W HPS & (2) 400W HPS	480V/1P	(1) 20A/3P, (1) 20A/1P	480V/3P	A, B, C	2200	NOTES 3, 4, 5, 6, 9

NOTES:

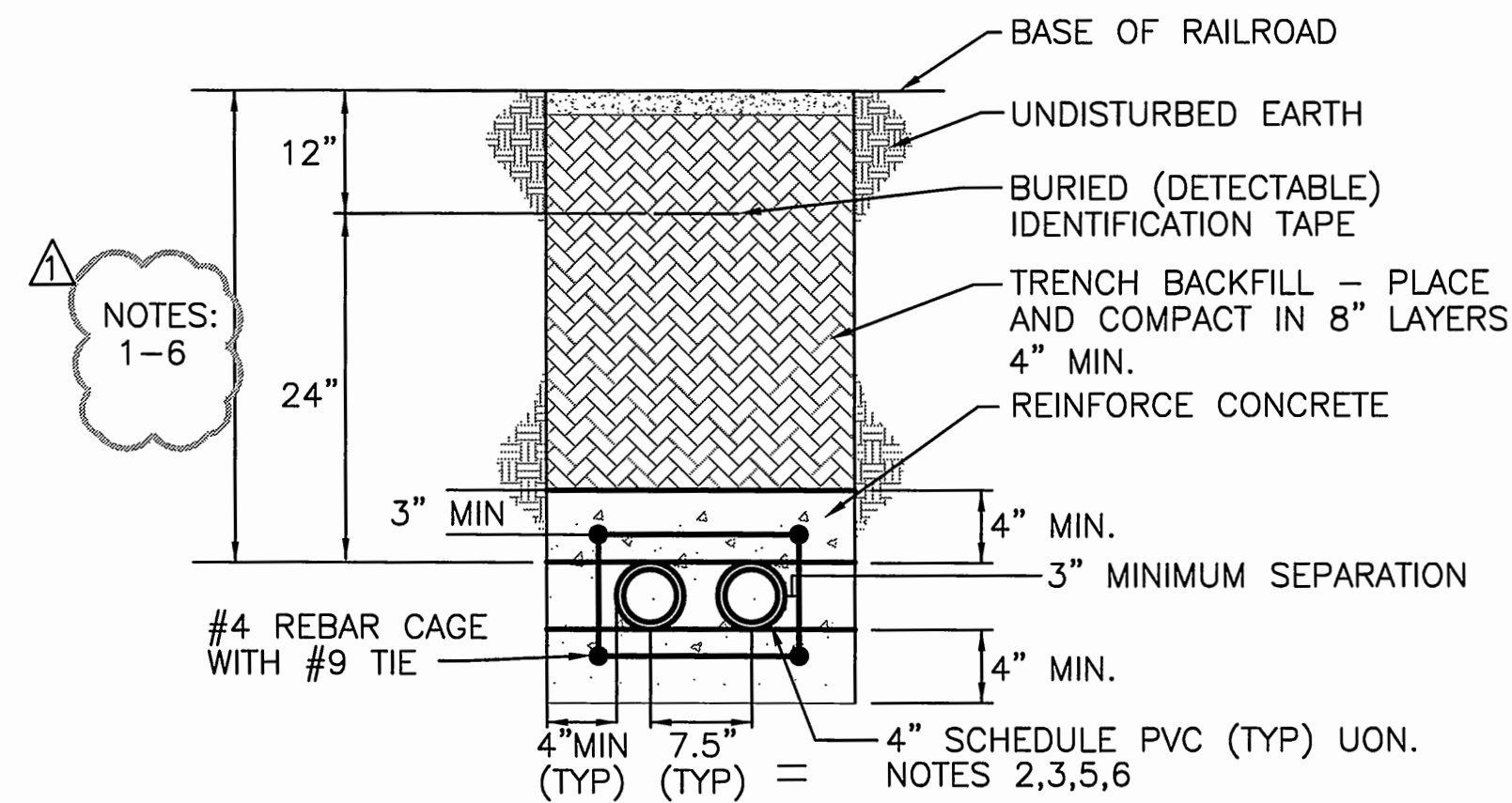
- LUMINAIRE SHALL BE EATON, PART # HMX 91SC-CWA EXTENDED LIFE-8-D-M. BRONZE BALLAST HOUSING WITH SILVER FINISH.
- ARM BRACKET SHALL BE GARMIRE G-WAG-4 OR EQUIVALENT WITH DUAL BOLT WOOD MOUNTING BAND CLAMP ON BRACKET AND 2" PIPE X 24" STEEL ARM TENONS. MOUNT ARMS 12" FROM TOP OF POLE. REFER TO DETAIL 8/E16.
- PROVIDE TWO DEDICATED GROUND RODS PER POLE.
- LUMINAIRE SHALL BE EATON, PART # FMVSY1000/480/M25S831
- REINSTALL SALVAGE (2) COBRA HEAD AND BRACKETS. MOUNT AT 20' AFG. ORIENT HEAD NORTH AND SOUTH.
- SEE DETAIL 7/E16 FOR UPPER LUMINAIRE ORIENTATION DETAIL.
- PROVIDE WITH EXTERNAL CUTOFF SHIELD TO MINIMIZE LIGHT INTRUSION ON ROAD.
- ARM BRACKET SHALL BE GARMIRE G-WAG-5 OR EQUIVALENT WITH DUAL BOLT WOOD MOUNTING BAND CLAMP ON BRACKET AND 2" PIPE X 24" STEEL ARM TENONS. MOUNT ARMS 12" FROM TOP OF POLE.
- ARM SHALL BE "BULL HORN" YOKE 30" LONG WITH (2) 2" ROUND TENONS 180 DEGREE APART. COLOR SHALL BE GRAY. LOCATE UPPER ARMS 12" FROM TOP OF POLE AND LOWER ARMS 30" BELOW TOP OF POLE.



3 LUMINAIRE POLE BASE DETAIL
SCALE: NONE



4 ELECTRIC POWER RAIL SWITCH
SCALE: NONE



NOTES:

- PROVIDE CONCRETE ENCASEMENT UNDER TRACKS FOR RACEWAYS LESS THAN 60" BELOW BOTTOM OF RAILS.
- PROVIDE A MINIMUM OF 12" HORIZONTAL SEPARATION BETWEEN CONDUIT AND OTHER UTILITIES.
- PROVIDE WIDE RADIUS SWEEP, OFFSET OF CONDUITS TO AVOID OTHER UTILITIES.
- CONDUIT UNDER RAILS SHALL HAVE A MINIMUM OF 36" BELOW BOTTOM OF RAILS.
- PROVIDE MINIMUM 12" SEPARATION BETWEEN POWER AND COMM RACEWAYS
- PROVIDE SAND ENCASEMENT FOR RACEWAYS 60" AND GREATER BELOW BOTTOM OF EXISTING RAILS. SEE DETAIL 1/E13

5 POWER AND COMM DETAIL CONCRETE REINFORCEMENT UNDER TRACKS AND PAVEMENT
SCALE: NONE

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Wood Harbinger

PAID BY REP: TACOMA WA 98401-1837

DATE: 5/3/16

BY: JAL

APPR: SWK

REVISION: #2

ADDENDUM: 1

SWK 03/17/16

CHECKED BY: JAL

DATE: 03/17/16

PROJ. ENGR: JAL

DATE: May 03, 2016

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA, WA 98401-1837

APPROVED: *Joe Letts*

5-4-16

DIRECTOR: JAL

PRINTED BY: cpeck

SECTION: 1, 2, 3

RANGE: 03E

TOWNSHIP: 20N

DAT-HRZ: W83-SF

PARCEL: MUL TIPLE

CONTRACT: 070164

M. ID: 092938

PHASE: ISSUE FOR BID

6555 E12

NORTH LEAD

ELECTRICAL DETAILS

