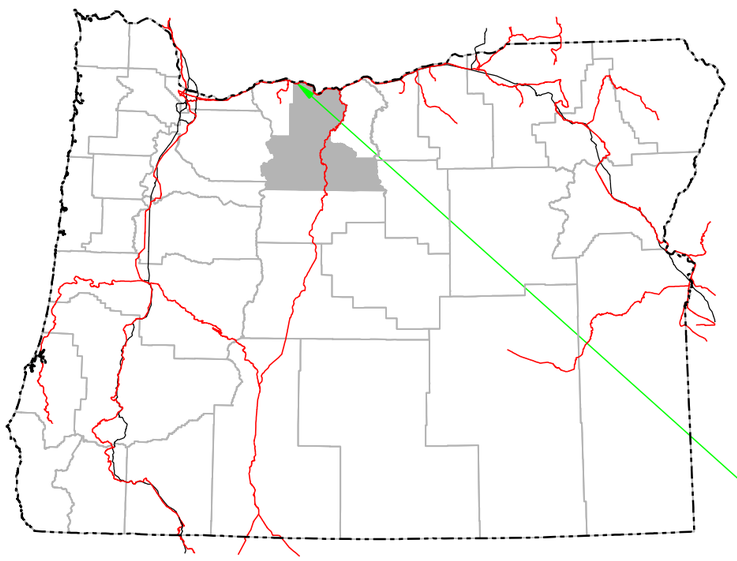
Appendix C
Engineering Drawings – 60% Design

This page intentionally blank

ENGINEERING DESIGN/CONSTRUCTION



State of Oregon

Project Location

Project Location Map

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

MOSIER, OREGON
PORTLAND SUBDIVISION
MILE POST 66.98 TO 72.35
CONSTRUCT SECOND MAINLINE

60% PLANS
NOT FOR CONSTRUCTION

WORK ORDER:
PROJECT NUMBER:
BUDGET REFERENCE:

LAST REVISED
10/20/2014

PROJECT INDEX

PROJECT DESIGN	DESCRIPTION
G001	COVER SHEET WITH VICINITY MAP
G002	PROJECT INDEX & REVISIONS
G003	GENERAL NOTES & PROJECT CONTACTS
G004	ABBREVIATIONS & LEGEND
G005	CONTROL POINTS & GEOMETRY
P001 to P022	PLAN & PROFILE
T001 to T009	TYPICAL SECTIONS
D001 to D010	ACCESS DETAIL
D011 to D013	GUARDRAIL DETAIL
D014	FENCE DETAIL
C001 to C007	CULVERT DETAILS
W001	RETAINING WALL DETAIL
X001 to X139	CROSS SECTIONS

STANDARDS	DESCRIPTION
RD400	OREGON DOT - GUARDRAIL AND METAL MEDIAN BARRIER
RD405	OREGON DOT - GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD415	OREGON DOT - GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD420	OREGON DOT - ENERGY ABSORBING TERMINAL
RD425	OREGON DOT - NON ENERGY-ABSORBING TERMINAL 3' OR 4' FLARE
RD430	OREGON DOT - GUARDRAIL INSTALLATION WIDE FLARE TERMINAL (EMBANKMENT)
RD450	OREGON DOT - GUARDRAIL ANCHORS (STEEL)
RD810	OREGON DOT - BARBED AND WOVEN WIRE FENCES
RD820	OREGON DOT - FENCE GATES

STRUCTURES DESIGN	DESCRIPTION

PROJECT INDEX (CONTINUED)

MECHANICAL DESIGN	DESCRIPTION

ELECTRICAL DESIGN	DESCRIPTION

PROJECT REVISIONS

REV. #	BY	DATE:	SHEET:	DESCRIPTION

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: G002 of 005

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PROJECT INDEX & REVISIONS

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\01_General\067070 G001-005.dgn
Default
10/20/2014

GENERAL NOTES

1. Contractors shall notify Service Alert, (800) 642-2444 and UPRR Fiber Optics Hotline (800) 336-9193, 48 hours prior to any excavation. The USA Authorization Numbers shall be kept at the job site.
2. No work whatsoever shall be commenced without first notifying the UPRR Engineer.
3. The Contractor shall comply with all Federal, State, County, and City Laws and Ordinances and Regulations of the Department of Industrial Relations, OSHA, NPDES and Industrial Accident Commission related to the safety and character of the work, equipment and labor personnel.
4. Contractor shall be responsible for coordinating with all Utility agencies.
5. Contractor shall protect in place (by any means necessary) all existing utilities to remain unless otherwise specified herein, contractor shall be responsible for the complete repair at his expense, for any damage to existing utilities, structures, or other site features, as a result of his work.
6. Prior to placing curbs, pavements, base, subbase, track, etc., all underground utilities shall be installed, backfill completed, and the Engineer notified by each of the utility companies having facilities within the work area, that the utility installation has satisfactorily passed acceptance tests.
7. All existing underground utilities, that are not to be re-used shall be abandoned in place. All existing pipelines to be abandoned in place shall be cement slurry filled and capped at least 3'-0" below top of proposed subgrade.
8. Contractor shall verify locations and elevations of existing utilities whether known or unknown prior to beginning construction.
9. Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, and pipelines not located prior to construction shall be brought to the attention of the engineer for determiniation of appropriate action such as removal or treatment in a manner judged suitable to the engineer.
10. Contractor shall coordinate location of all proposed utilities with UPRR to assure accuracy of utility connections and compliance with local codes.
11. Any existing conditions found to be a variance with these drawings must be immediately reported to the Engineer.
12. Contractor shall maintain and clean to the satisfaction of the Engineer, all access and service roads used during construction.
13. Contractor shall perform all construction in such a manner as to protect adjacent existing buildings, and other site elements which are to remain in service.
14. Contractor shall provide As-built Drawings for all improvements.
15. No field changes will be permitted without direct written authorization from the UPRR Engineer or his representative.
16. Contractor shall coordinate work which affects adjacent property owners. Any questions or agreements between adjacent property owners and contractor shall be made in writing. A copy of such agreement shall be provided to the UPRR Engineer or his representative.
17. The contractor is responsible for preparing a Stormwater Pollution Prevention Plan (SWPPP) to comply with State regulations. General specifications and typical erosion control details are included in the plan set.
18. Right-of-way lines shown on the plans were taken from existing UPRR right-of-way map and are approximate.
19. Match lines for sheets are based on the existing Main Line stationing unless otherwise specified.
20. Track laying, ballasting, and installation of road crossing panels will be done by UPRR unless otherwise stated.
21. Where existing culverts are to be extended, the contractor shall expose existing drainage structures and field verify size and type before ordering.
22. The contractor is responsible for the removal of all pavement markings that will be in conflict with the proposed work.
23. Contractor shall comply with all OREGON and WASCO COUNTY standard specifications for construction of public improvements requirements. WASCO COUNTY standard specifications shall prevail.
24. Contractor shall maintain at least one access to all affected business. If necessary, multiphase construction shall be utilized.

DESIGN CRITERIA

1. UPRR standard plans and trackworks
2. WASCO COUNTY Public Works Engineering Division
3. OREGON Department of Transportation Roadway Standards

SURVEY NOTES

1. Railroad stationing for project profiles and alignments is based on stations established for chord definition spiraled curves at the centerline of the existing UPRR Main Line unless otherwise noted.
2. The contractor is responsible for the preservation of all survey control monuments. In the event monuments are damaged or destroyed by the contractor, the Engineer will replace the monument solely at the contractor's expense.

	DATUM
HORIZONTAL	MODIFIED STATE PLANE
VERTICAL	NAVD 88

TRAFFIC NOTES

1. All barricades, warning signs, lights, devices, etc. for the guidance of vehicle traffic and pedestrians must conform to the installation shown in the Manual on Uniform Traffic Control Devices (MUTCD), current edition.
2. Contractor shall make twice daily inspections of barricades and flashing lights to ensure proper placement and functioning of warning devices.
3. Grade crossings closed to traffic during construction shall be barricaded in accordance with the MUTCD.
4. At all grade crossings, all grade crossing warning signs (crossbuck) shall temporarily be relocated during construction and reset after the grade crossings construction is completed to a point adjacent to the roadway and 15 feet from the centerline of the near track as stated in the MUTCD except where automatic grade crossing warning signals/gates exisit. All automatic warning devices are the responsibility of UPRR. At no time shall a crossing be left open without proper warning signs in place.
5. Contractor shall submit traffic control plans to WASCO COUNTY PUBLIC WORKS Department for approval at least 2 weeks prior to each road closure. Plans shall be 11" x 17" engineered drawings, sealed by a professional engineer from the STATE OF OREGON.
6. The contractor is responsible for the prompt replacememt and/or repair of all traffic control devices and appurtenances damaged or disturbed due to construction.

PROJECT CONTACTS

CONTACT	PHONE NUMBER	UPRR
		Civil Construction Project Manager
Erin Cully	402.320.8547	Civil Construction Field Manager
Curt Maddex	209.546.7260	Track Construction Project Manager
Mark Wangberg	402.544.3527	Project Design Manager
Ryan Kosola	402.938.2417	Project Design Sr. Project Designer
Mike Bruckner	402.544.7164	Structures Design Sr. Manager
Travis Schafer	402.938.2447	Structures Design Manager
Michael Heald	402.544.3719	Information Technology - Fiber
John Van Gelder	402.544.8532	Real Estate - Utilities
Stephanie Tingley	402.544.5453	Real Estate - Acquisitions

CONTACT	PHONE NUMBER	FIBER

CONTACT	PHONE NUMBER	UTILITIES

CONTACT	PHONE NUMBER	FEDERAL AND LOCAL GOVERMENT AGENCY

PHONE NUMBER	GENERAL
(800) 336-9193	UPRR CALL BEFORE YOU DIG
(888) 258-0808	CALL BEFORE YOU DIG (NATIONAL DIRECTORY)
(888) 877-7267	UPRR Response Management Communications Center (RMCC)

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: G003 of 005

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
GENERAL NOTES & PROJECT CONTACTS

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\01_General\067070 G001-005.dgn
Default
10/20/2014

ABBREVIATIONS

MISCELLANEOUS

Ac.	Acres
Ave.	Avenue
Blvd.	Boulevard
Bldg.	Building
BNSF	BNSF Railway
C.Y.	Cubic Yards
Conc.	Concrete
°	Degree (s)
Dia.	Diameter
Dr.	Drive
Dwg.	Drawing
E	East
Elev.	Elevation
Exist.	Existing
'	Foot, Feet or Minute (s)
F.S.	Finished Surface
Horiz.	Horizontal
"	Inch, Inches or Second (s)
Inv.	Invert
Lt.	Left
L	Length
L.F.	Lineal Feet
Max.	Maximum
Min.	Minimum
N	North
NTS	Not to Scale
No.	Number
OH	Overhead
Prop.	Proposed
RR	Railroad
Rwy	Railway
R/W	Right of Way
Rt.	Right
S	South
S.F.	Square Feet
Sta.	Station
Std.	Standard
St.	Street
Twp.	Township
Typ.	Typical
UG	Underground
UPRR	Union Pacific Railroad
V	Velocity
Wt.	Weight
W	West
X-ing	Crossing

SIGNAL

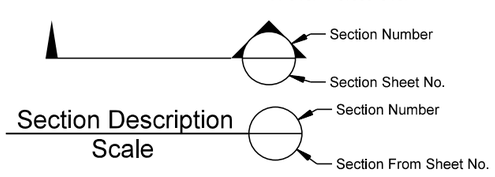
ABS	Automatic Block Signal
ATC	Automatic Train Control
CTC	Centralized Traffic Control
DED	Dragging Equipment Detector
DTC	Direct Traffic Control
ELTO	Electric Lock Turnout
HBD	Hot Box Detector
HTTO	Hand Throw Turnout
HWD	High Wide Dectector
POTO	Power Operated Turnout
TWC	Track Warrant Control
WILD	Wheel Impact Load Dectector

STRUCTURES

Bldg.	Building
Br.	Bridge
CB	Catch Basin
CPT	Concrete Pile Trestle - Ballast Deck
CIP	Cast Iron Pipe
CMP	Corrugated Metal Pipe
CMPA	Corrugated Metal Pipe Arch
CSP	Corrugated Steel Pipe
Culv.	Culvert
DI	Drop Inlet
DPGBD	Deck Plate Girder - Ballast Deck
DPGOD	Deck Plate Girder - Open Deck
EBW	East Backwall
F.L.	Flowline
F.F.	Finished Floor
GIP	Galvanized Iron Pipe
Hdwl	Headwall
NBW	North Backwall
PSCT	Prestressed Concrete Trestle
RCA	Reinforced Concrete Arch
RCB	Reinforced Concrete Box
RCP	Reinforced Concrete Pipe
SBW	South Backwall
SSP	Smooth Steel Pipe
SPTBD	Steel Pile Trestle - Ballast Deck
SPTOD	Steel Pile Trestle - Open Deck
SPP	Structural Plate Pipe
TPGBD	Through Plate Girder - Ballast Deck
TPGOD	Through Plate Girder - Open Deck
TPTBD	Timber Pile Trestle - Ballast Deck
TPTOD	Timber Pile Trestle - Open Deck
TTBD	Through Truss - Ballast Deck
TTOD	Through Truss - Open Deck
TWB	Treated Wood Box
VCP	Vitrified Clay Pipe
Viad.	Viaduct
WBW	West Backwall
WIP	Wrought Iron Pipe

TRACK

ATR	Above Top of Rail
Align.	Alignment
BBR	Below Base of Rail
Cntrs.	Centers
CWR	Continuous Welded Rail
DSPD	Double Switch Point Derail
EOT	End of Track
HH	Head Hardened
Jtd.	Jointed Rail
LH	Left Hand
ML	Main Line
MM	Mile Marker
MP	Mile Post
NSC	Not Sufficient Clearance
OTM	Other Track Material
PCC	Point of Compound Curve
PC	Point of Curve
PCS	Point of Curve to Spiral
POC	Point on Curve
PF	1/2" Point of Frog
PI	Point of Intersection
PITO	Point of Intersection of Turnout
PS	Point of Spiral
PSC	Point of Spiral to Curve
POS	Point on Spiral
PT	Point of Tangent
POT	Point on Tangent
Pt. Sw.	Point of Switch
PVC	Point of Vertical Curve
PVI	Point of Vertical Intersection
PVT	Point of Vertical Tangent
RH	Right Hand
SH	Second Hand
SSPD	Single Switch Point Derail
TC	Track Centers
T.F.	Track Feet
Trk.	Track
UXO	Universal Cross-Over
X-Over	Cross-Over



UTILITIES

- AIR — Compressed Air
- F/O — Fiber Optic Cable
- G — Gas Pipeline
- OHP — Overhead Power Line
- SS — Sanitary Sewer
- Overhead Signal Line
- UGS — Underground Signal Line
- Steam Line
- S — Storm Sewer
- T — Telephone
- UGE — Underground Electric
- W — Water Main
- Underground Wire
- Under Drain
- V. — Valve
- M.H. — Manhole
- C.B. — Catch Basin
- F.H. — Fire Hydrant
- Junction Box
- Electric Meter
- Gas Meter
- Water Meter
- M.W. — Monitoring Well
- PUMP — Pump

TRACK

- Existing Mainline
- Existing Siding or Spur
- Proposed
- Remove
- Shift
- Relay
- Future
- Foreign Railroad or Industry
- In Buildings or Under Structures
- Turnout
- Wheel Stop
- Bumping Post
- Earthen Bumper
- 56' — Inert Retarder
- 52' — Dowty Retarder
- Derail
- Switch Point Derail or Double Switch Point Derail

PROPERTY

- Section Line
- Center Section Line
- Parcel or Easement Line
- Right of Way
- Former Right of Way
- Right of Way to be Acquired
- Foreign Right of Way
- Temp. Const. Easement

SYMBOLS

ROAD CROSSING WARNING DEVICES

- Crossbuck Sign
- Flashing Light Warning Device
- Flashing Light Warning Device with Gate
- Cantilever Flashing Light Warning Device
- Cantilever Flashing Light Signal with Gate

SIGNAL

- Absolute Signal
- Signal Bridge
- Cantilever Signal
- ACS or CTC Signal
- Dwarf Signal
- Begin CTC
- Microwave Tower
- AEI — AEI
- BB — Battery Box
- Dragging Equipment Detector
- GEN. — Generator
- Hot Box Detector

STRUCTURES

- Culvert
- Culvert with Headwalls
- Double Culvert
- Railroad Bridge
- Highway Overpass
- Highway Underpass
- Tunnel
- Building
- FP — Flag Pole

LIGHTING

- Light Pole
- Light Tower

SIGNS

- Stop
- Yard Limit
- 1 Mile to Yard Limit
- W — Whistle Post
- Flanger
- Station
- Reduce Speed
- Resume Speed
- General Purpose

FENCES

- Barbed Wire
- Chain Link
- Snow / Sand
- Cattle Guard

ROADS

- Paved Road
- Unimproved Road
- 80 — Interstate Highway
- 20 — Federal Highway
- 58 — State Highway
- C3 — County Highway

OTHER

- Wetlands
- River or Lake
- Ordinary High Water Mark
- Embankment
- Flow Line
- Milepost
- MM — Milemarker
- 15 — Control Point
- 1 — Revision Number
- Revision Cloud

CONSTRUCTION

- Note — Note (Work by Contractor)
- Note — Note (Work by Others)
- Cut Lines
- Fill Lines

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	G004 of 005

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ABBREVIATIONS & LEGEND

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\01_General\067070 G001-005.dgn
Default
10/20/2014

Control Points					
Point No.	Project Track	Offset	Northing	Easting	Elevation
1	1565+99.66	694.79 LT	737710.672	7972746.41	102.858
2	1465+14.38	51.61 LT	739043.708	7963067.99	103.387
3	1538+97.75	41.93 LT	738128.801	7970088.805	108.412
4	1487+00.73	43.74 LT	738192.81	7965024.796	101.483
5	1498+84.69	42.74 LT	737875.108	7966165.335	103.723
6	1744+57.90	507.48 RT	741146.766	7988058.146	220.078
7	1456+00.55	19.06 LT	739647.696	7962381.518	99.286
8	1478+89.33	20.51 LT	738387.492	7964236.761	101.015
9	1493+32.56	37.29 LT	738017.565	7965631.872	102.167
10	1508+18.99	51.57 LT	737678.766	7967069.122	106.739
11	1516+53.94	51.22 LT	737716.362	7967884.966	106.071
12	1522+94.02	44.11 LT	737868.104	7968502.646	100.053
13	1536+13.19	37.58 LT	738162.904	7969795.559	98.432
14	1547+56.43	18.54 LT	737677.643	7970829.14	101.562
15	1555+13.97	21.56 LT	737375.488	7971513.688	101.285
16	1562+68.75	19.41 LT	737157.903	7972236.432	101.423
17	1575+37.07	18.92 RT	736884.136	7973467.352	102.027
18	1582+67.79	19.30 LT	737226.892	7974111.591	101.842
20	1556+40.00	197.33 RT	737129.726	7971571.969	102.477
21	1479+60.97	39.50 LT	738386.627	7964310.867	101.247
22	1582+97.26	230.19 LT	737422.648	7974027.786	111.562
23	1590+56.18	21.45 RT	737635.34	7974787.085	101.519
24	1598+46.72	18.49 RT	738144.83	7975391.319	101.690
25	1630+01.40	36.42 LT	740298.083	7977656.809	96.343
26	1637+67.88	14.65 RT	740844.582	7978196.538	102.106
27	1646+01.85	47.83 LT	741463.276	7978763.333	104.340
28	1652+79.61	29.85 RT	741723.773	7979395.311	100.344
29	1665+43.16	19.68 LT	742267.601	7980536.643	99.793
30	1673+00.46	19.07 LT	742543.783	7981243.743	101.597
31	1685+95.74	19.35 RT	742579.818	7982528.028	102.033
32	1694+03.60	14.37 RT	742374.062	7983306.238	101.534
33	1700+84.98	54.88 RT	742135.655	7983945.84	101.014
34	1701+47.14	32.47 LT	742200.956	7984030.859	100.835
35	1707+96.66	25.49 LT	742016.399	7984651.011	102.643
36	1720+24.73	11.48 LT	741897.659	7985860.545	100.593
37	1728+05.41	22.60 LT	742034.17	7986629.865	103.046
38	1735+80.71	10.20 RT	741907.519	7987390.43	102.683
39	1743+73.91	22.48 LT	741675.851	7988149.664	101.670
40	1751+06.57	18.41 LT	741497.105	7988854.096	102.545
41	1563+91.65	100.00 RT	737008.37	7972320.114	135.610
200	1448+90.76	13.06 LT	740131.565	7961862.739	99.993
201	1564+44.85	12.12 LT	737100.633	7972403.115	101.325
202	1640+85.55	13.09 RT	741080.114	7978408.412	102.757
3571	1584+62.11	50.67 RT	737267.456	7974314.105	98.497

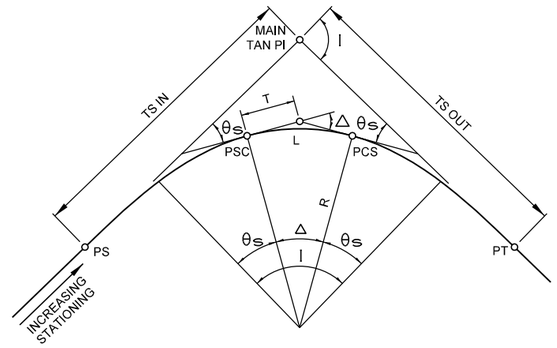


FIGURE A
CIRCULAR CURVES WITH SPIRAL TRANSITION

I - TOTAL INTERSECTION ANGLE

θ_S - SPIRAL ANGLE = $\frac{A L^2}{2}$

Δ - CENTRAL ANGLE OF CIRCULAR CURVE = $I - 2\theta_S$

Dc - DEGREE OF CURVE

A - RATE OF CHANGE OF DEGREE OF CURVE PER 100-ft. OF LENGTH = $\frac{Dc}{L}$

R - RADIUS OF CIRCULAR CURVE

T - TANGENT LENGTH OF CIRCULAR CURVE = $R \tan\frac{\Delta}{2}$

L - LENGTH OF CIRCULAR CURVE = $\frac{\Delta}{Dc} \times 100$

PS - TANGENT TO SPIRAL

PSC - SPIRAL TO CURVE

PCS - CURVE TO SPIRAL

PT - SPIRAL TO TANGENT

MAIN TAN PI - POINT OF INTERSECTION OF MAIN TANGENTS

(TS IN)
(TS OUT) - TANGENT LENGTH OF COMPLETE CURVE = $(R+o) \tan\frac{I}{2} + t$

(WHEN SPIRALS OF EQUAL LENGTH ARE USED ON BOTH SIDES OF CIRCULAR CURVE, SEE FIGURE C. FOR o AND t).

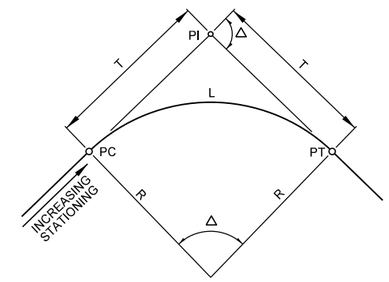


FIGURE B
SIMPLE CIRCULAR CURVE

R = RADIUS OF CIRCULAR CURVE

Δ = CENTRAL ANGLE OF CIRCULAR CURVE

$T = R \tan\frac{\Delta}{2}$

$L = \frac{\Delta}{Dc} \times 100$

$Dc = 2 \sin^{-1} (50/R)$ = DEGREE OF CURVE (CHORD DEFINITION)

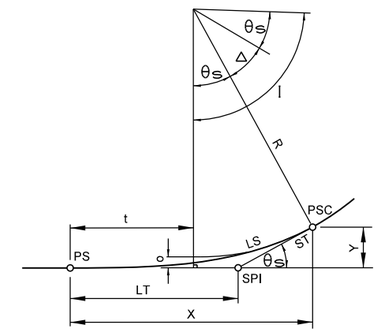


FIGURE C
SPIRAL TRANSITION CURVE

SPIRAL TRANSITION CURVE DATA:
THE SPIRAL USED IS DEFINED BY THE TALBOT SPIRAL.

LS = LENGTH OF SPIRAL (TS TO PSC)

$\theta_S = \frac{A L^2}{2}$

$X = 100 L_1 - 0.000762 A^2 L_1^5$

$Y = 0.291 A L_1^3 - 0.00000158 A^3 L_1^7$

$o = 0.0727 A L_1^3$

$t = 50 L_1 - 0.000127 A^2 L_1^5$

$ST = \frac{Y}{\sin \theta_S}$

$LT = X - \frac{Y}{\tan \theta_S}$

$Dc = 2 \sin^{-1} (50/R)$ = DEGREE OF CURVE (CHORD DEFINITION)

L_1 - TOTAL NO. OF STATIONS IN SPIRAL

SPI - SPIRAL POINT OF INTERSECTION

NOTE: Dc, θ_S, Δ, AND I ARE IN DEGREES.
ALL OTHERS DIMENSIONS ARE FEET.

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	G005 of 005

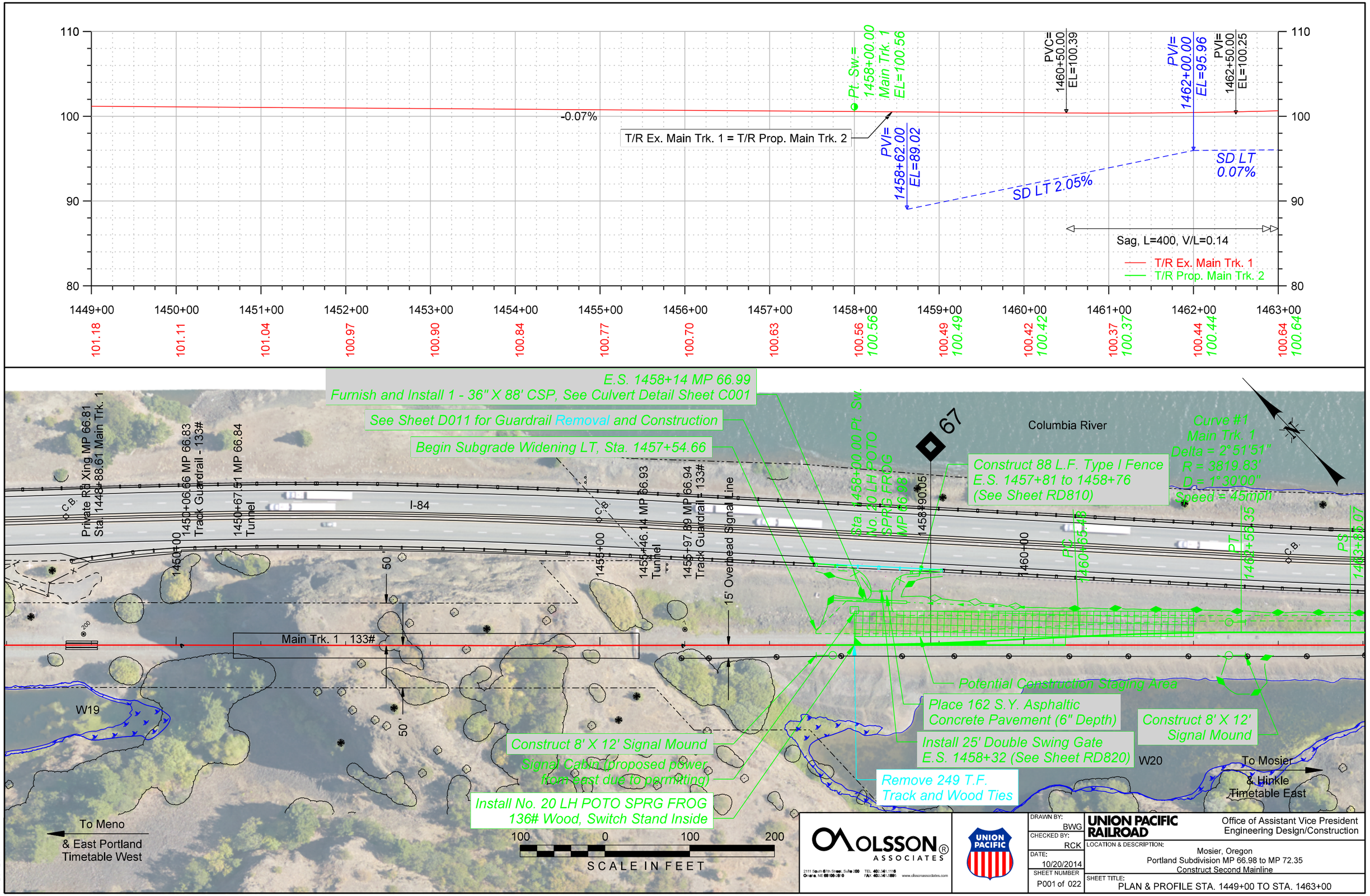
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CONTROL POINTS & GEOMETRY

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\01_General\067070 G001-005.dgn
Default
10/20/2014



Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_001.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

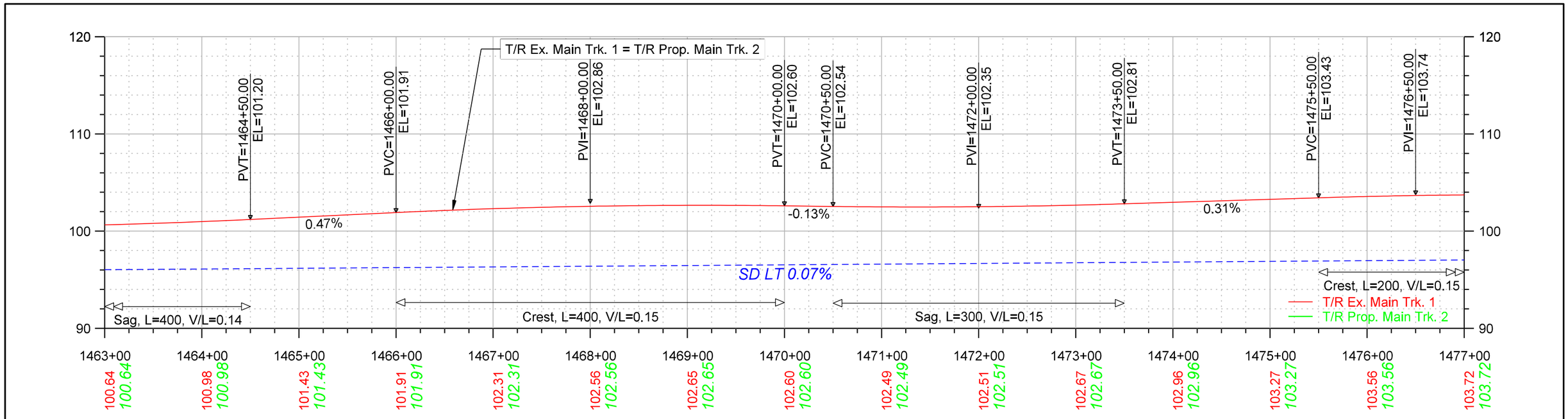
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P001 of 022

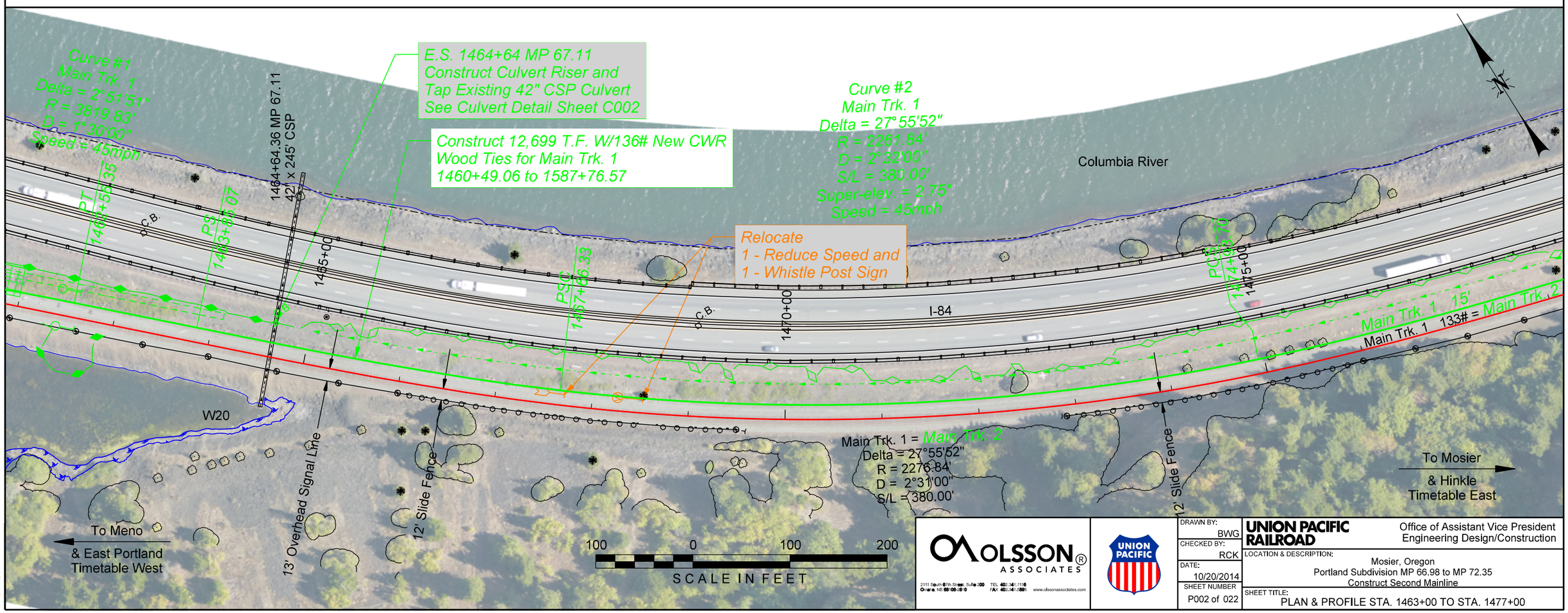
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1449+00 TO STA. 1463+00





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P002 of 022

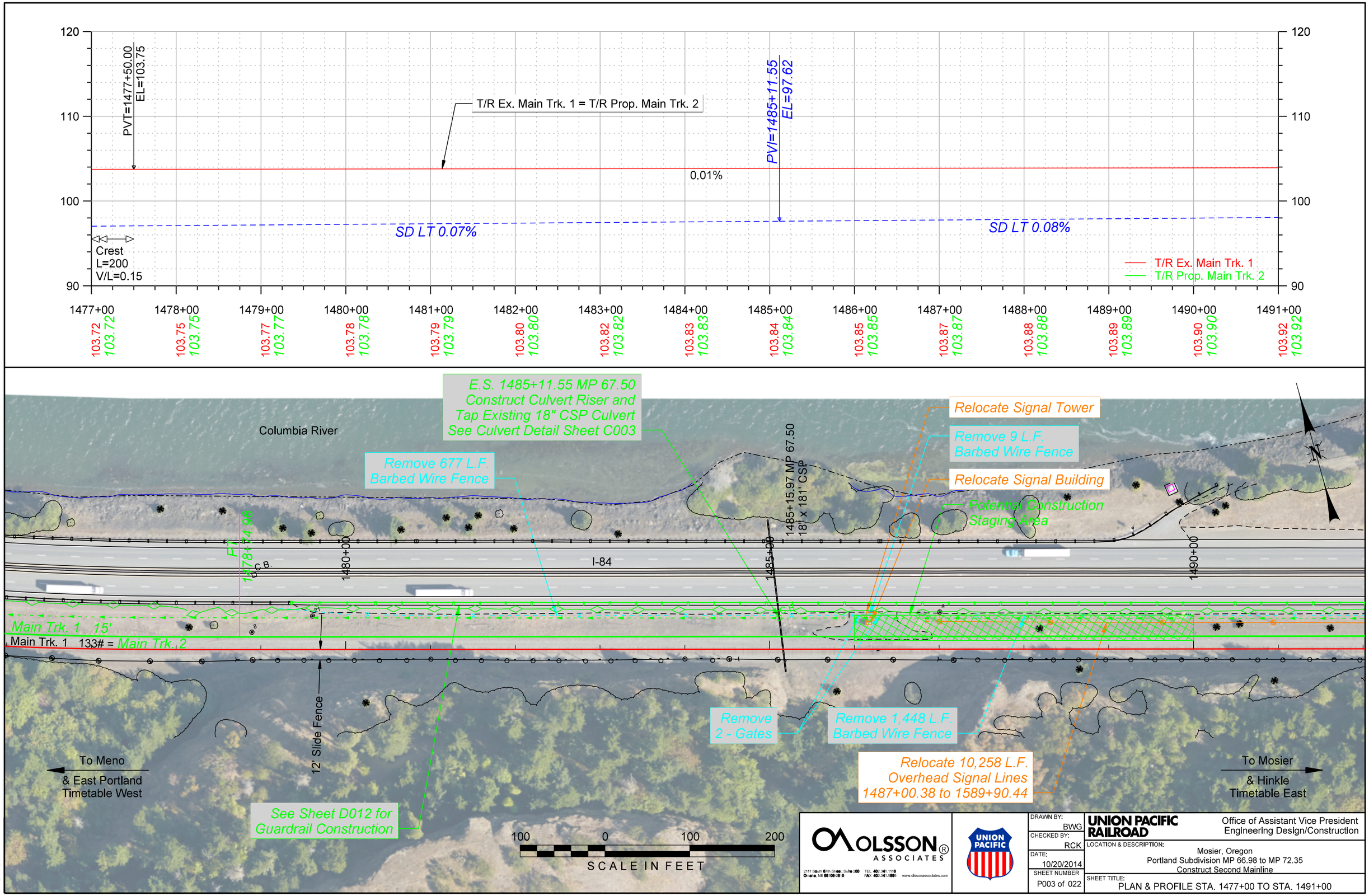
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

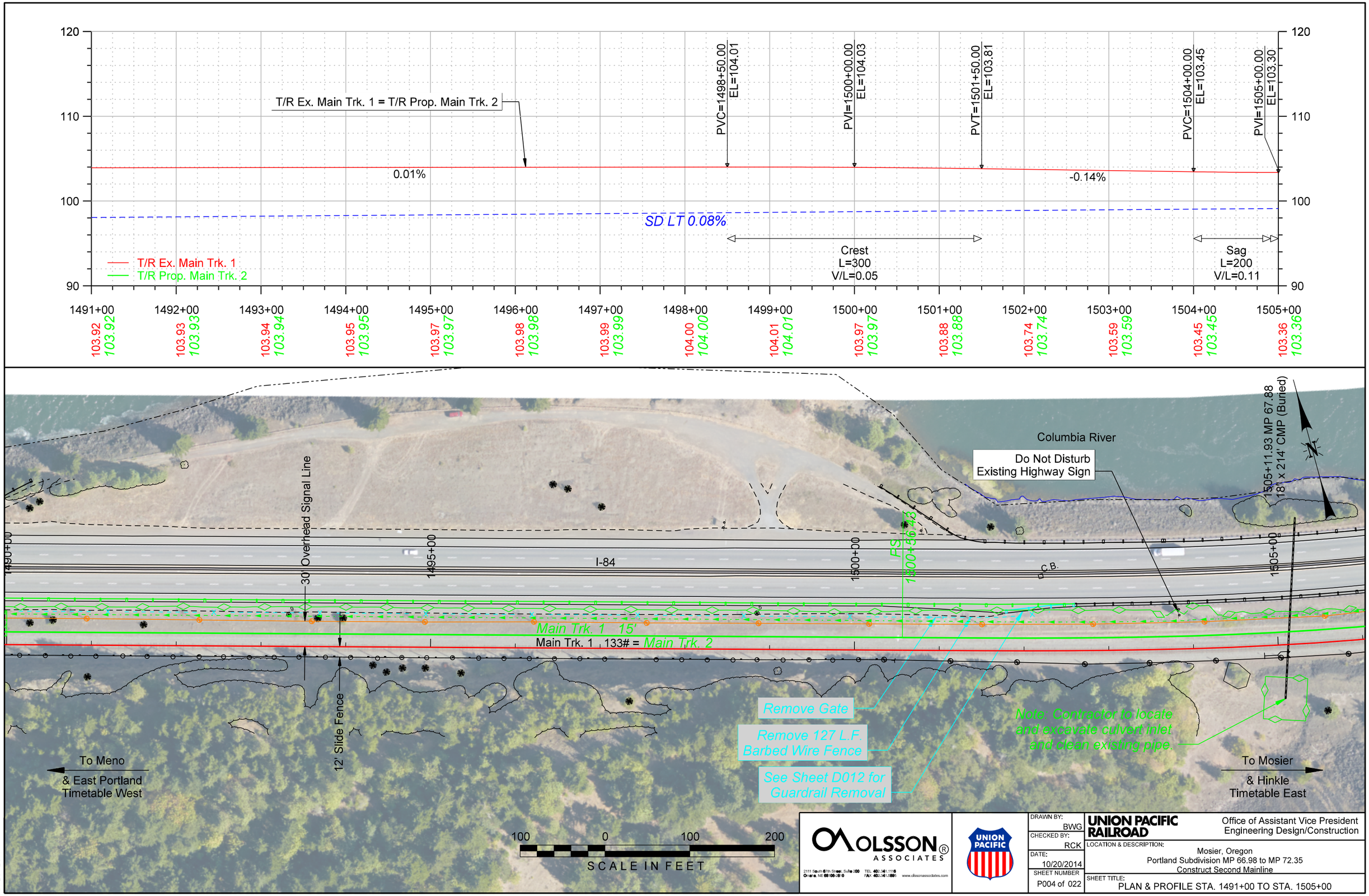
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1463+00 TO STA. 1477+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_002.dgn
Default
10/20/2014



Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_003.dgn
Default
10/20/2014



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P004 of 022

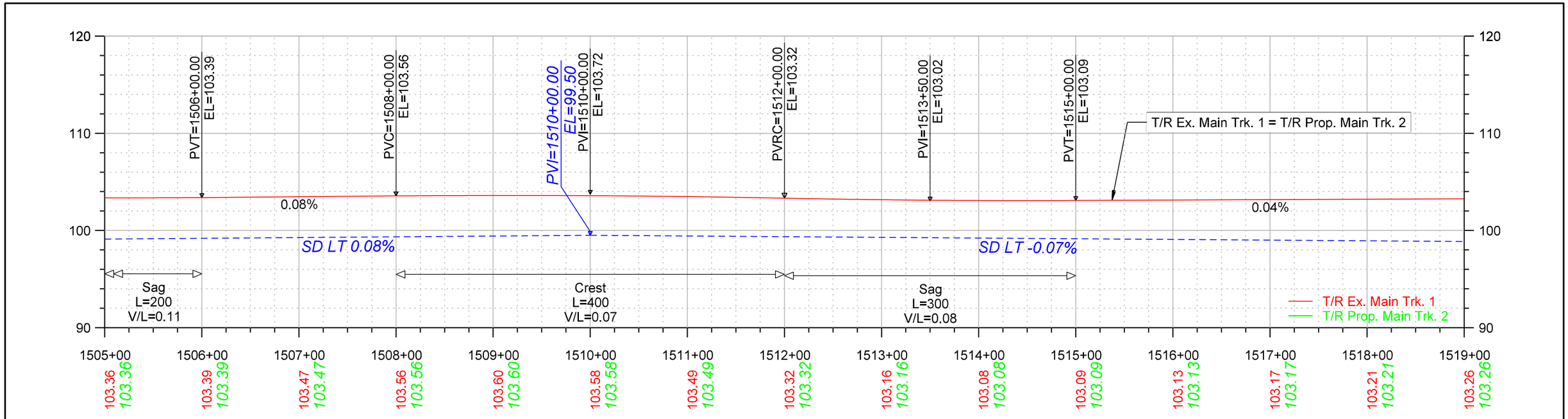
UNION PACIFIC RAILROAD

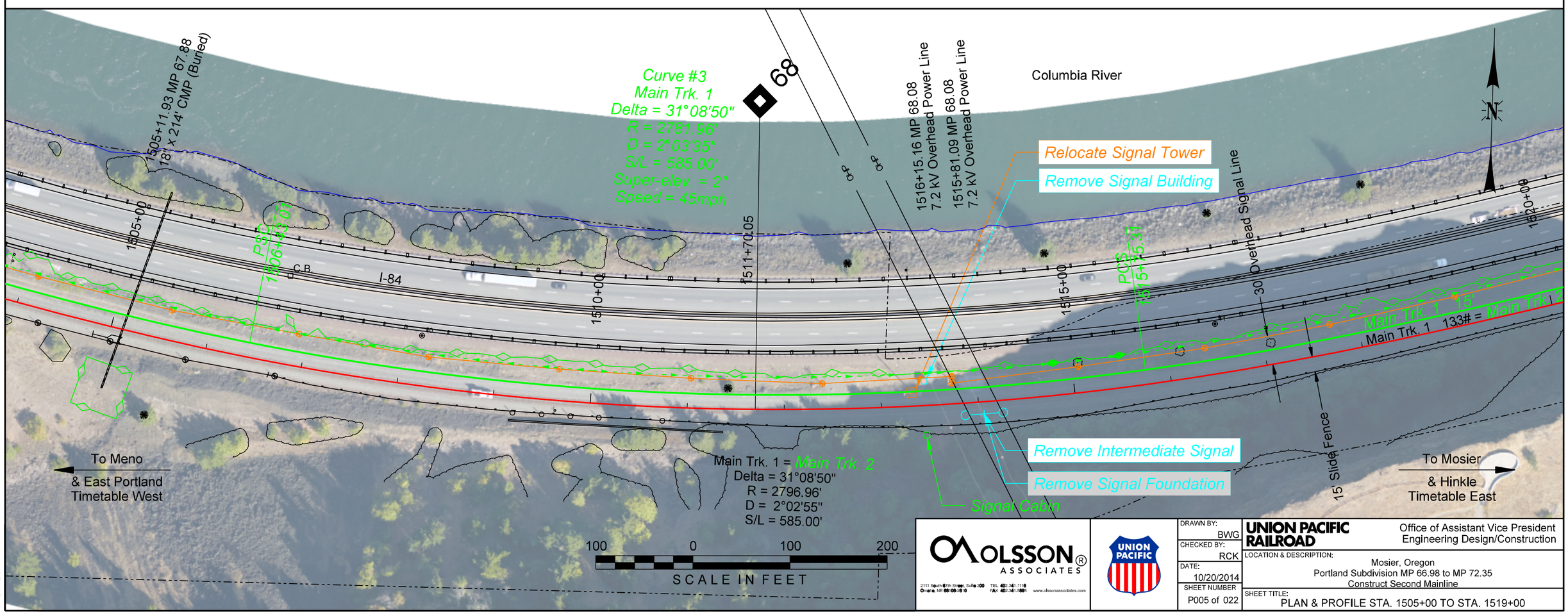
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1491+00 TO STA. 1505+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_004.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P005 of 022

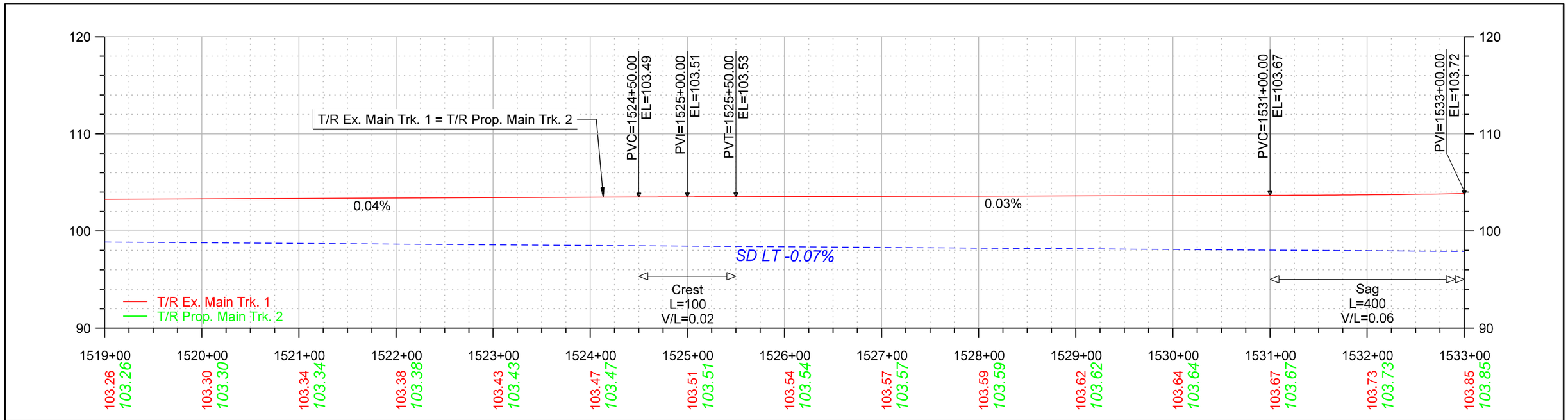
UNION PACIFIC RAILROAD

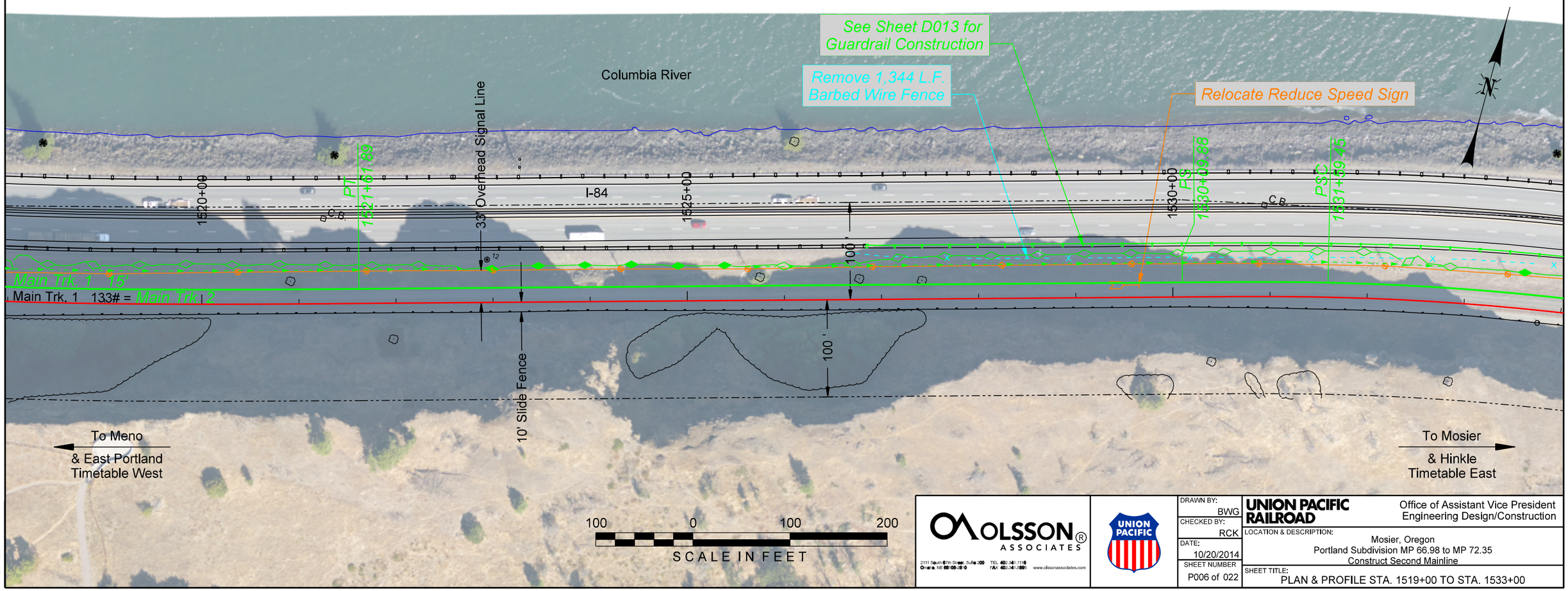
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1505+00 TO STA. 1519+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_005.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.0667
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P006 of 022

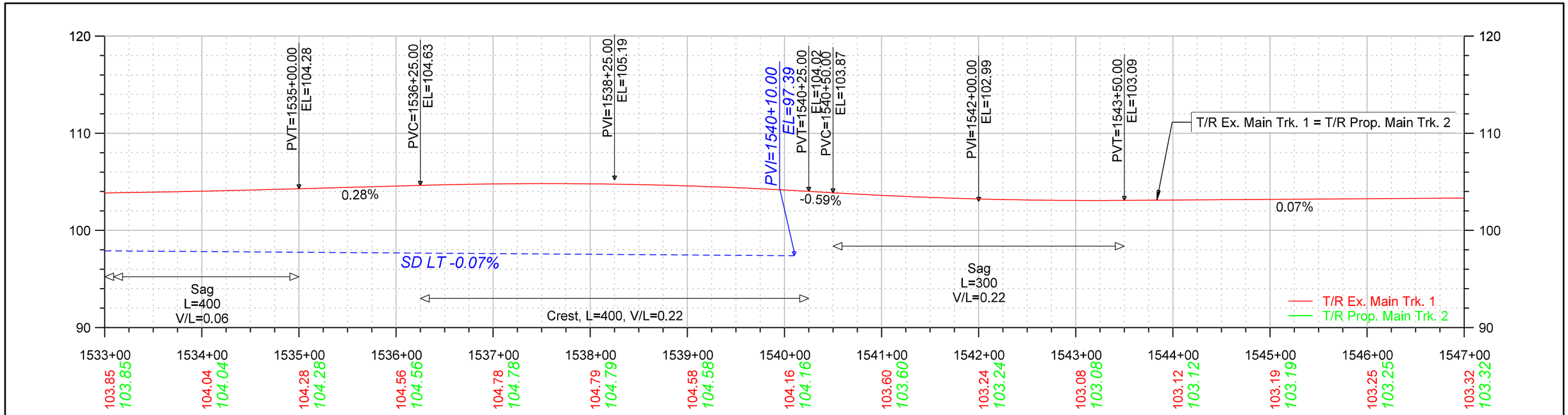
UNION PACIFIC RAILROAD

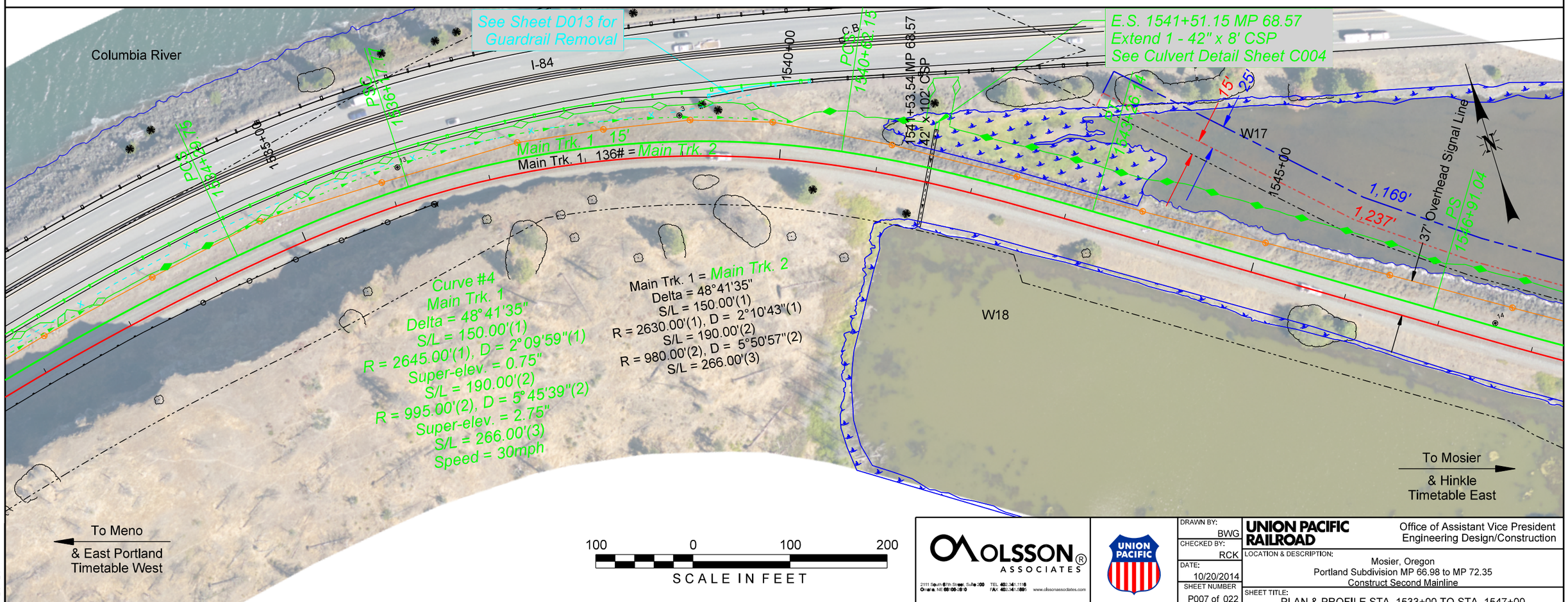
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1519+00 TO STA. 1533+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_006.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P007 of 022

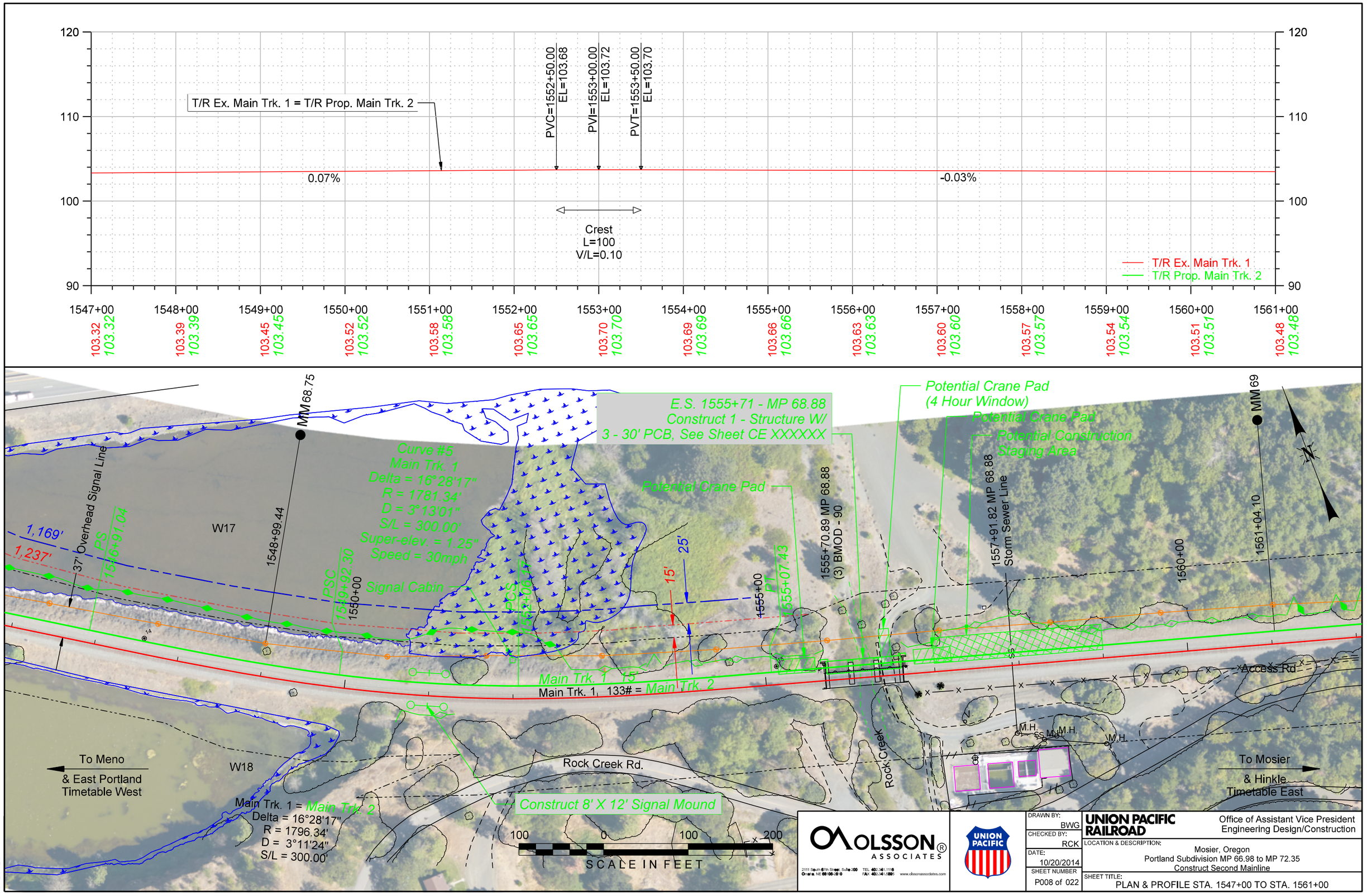
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

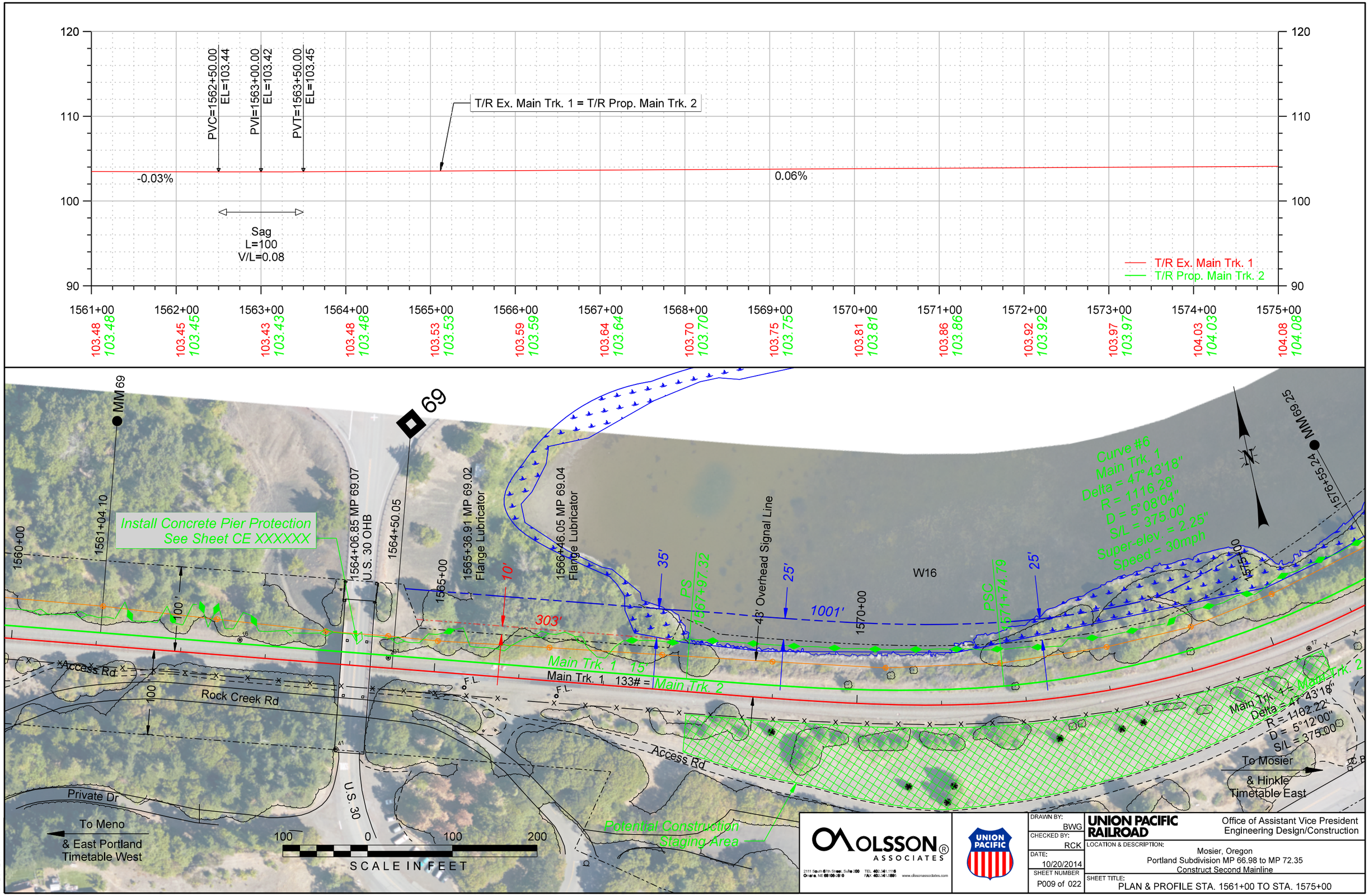
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1533+00 TO STA. 1547+00

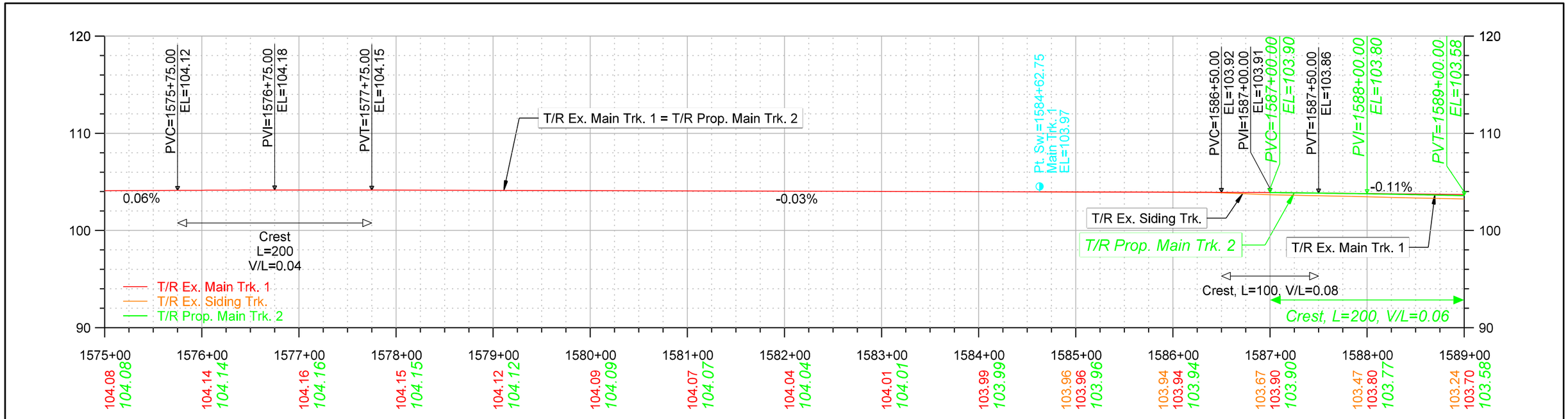
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_007.dgn
Default
10/20/2014

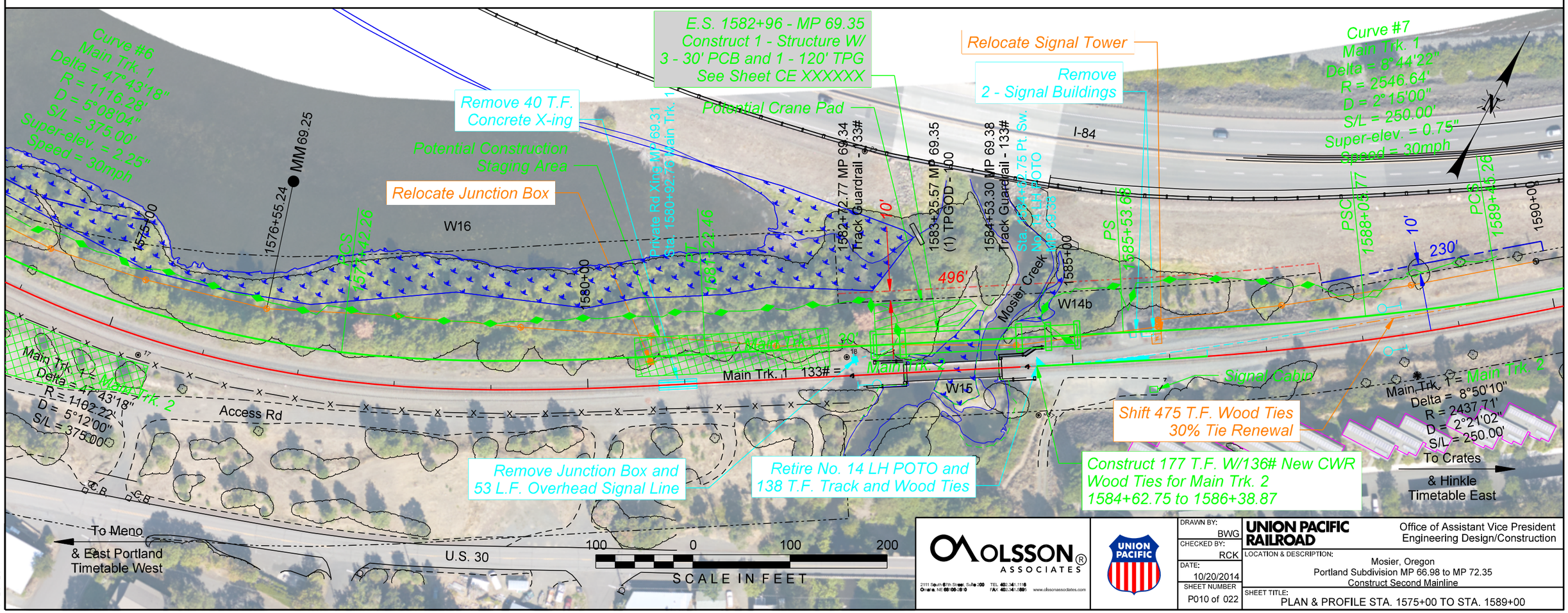


Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_008.dgn
Default
10/20/2014



Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070_PP_009.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3910
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

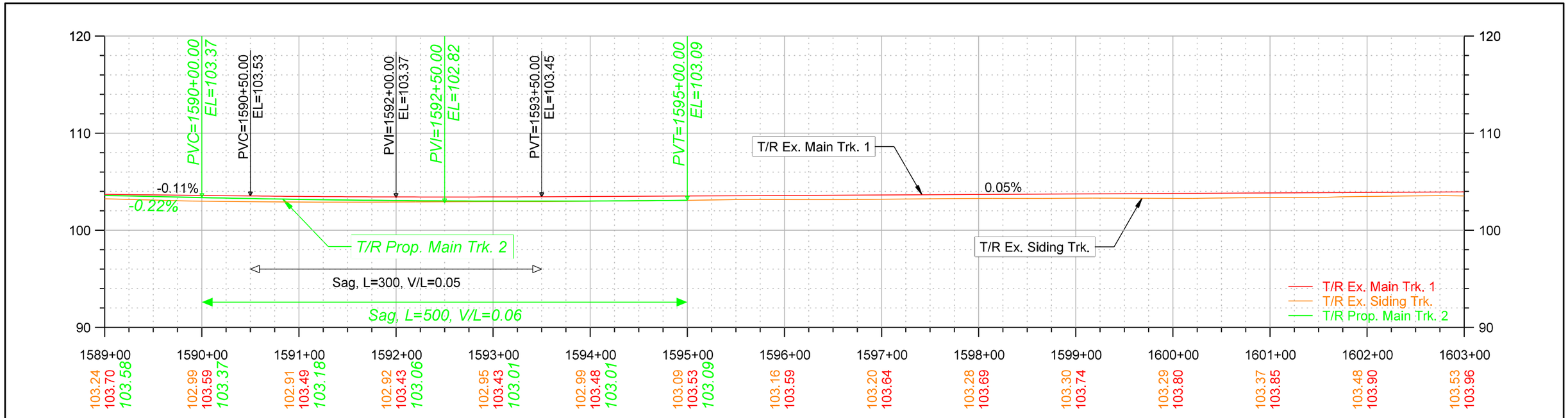
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P010 of 022

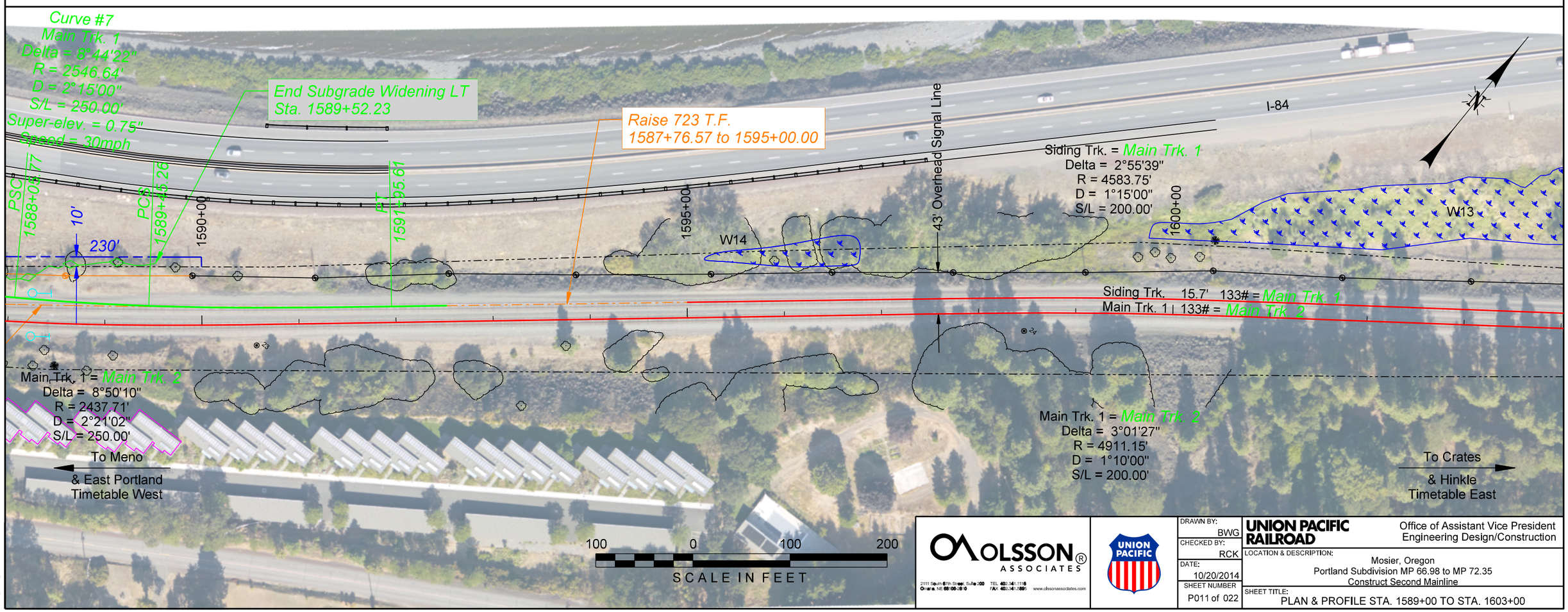
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1575+00 TO STA. 1589+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_010.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P011 of 022

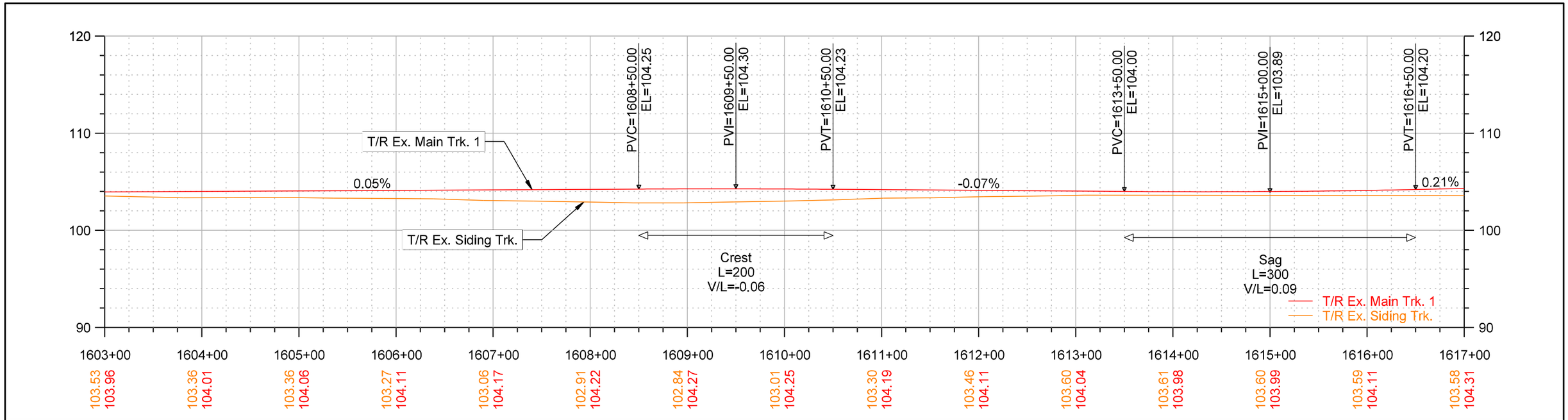
UNION PACIFIC RAILROAD

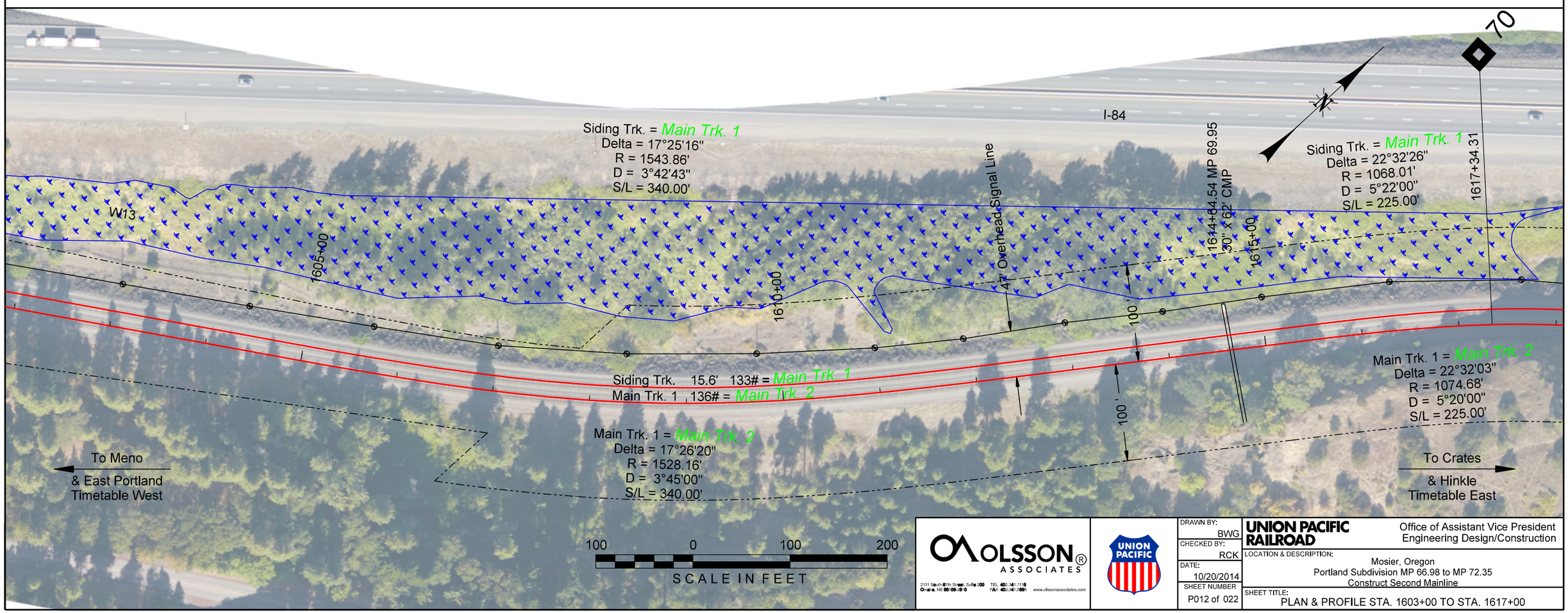
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1589+00 TO STA. 1603+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_011.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P012 of 022

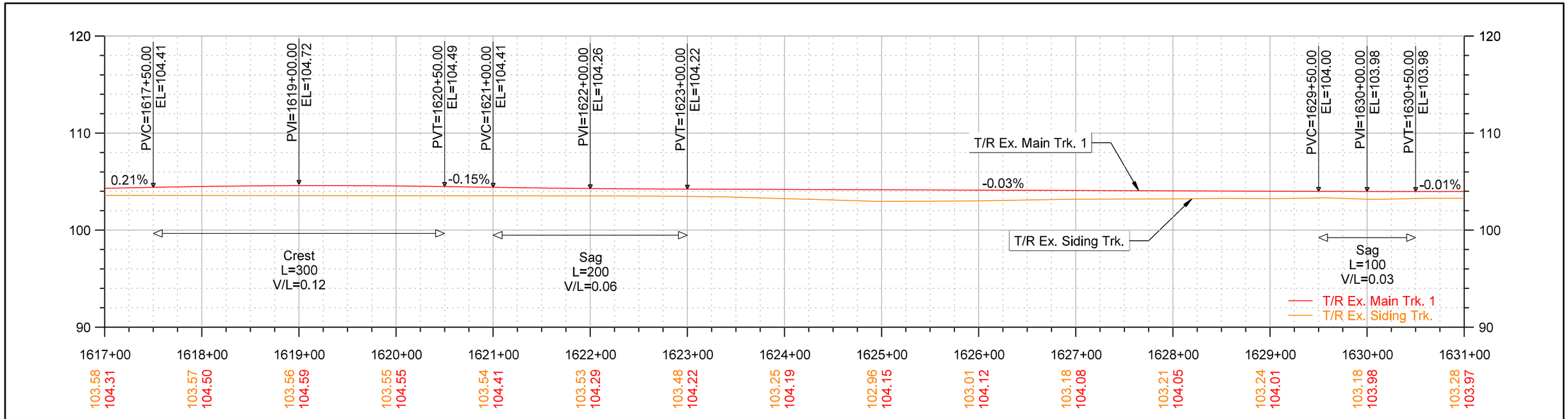
UNION PACIFIC RAILROAD

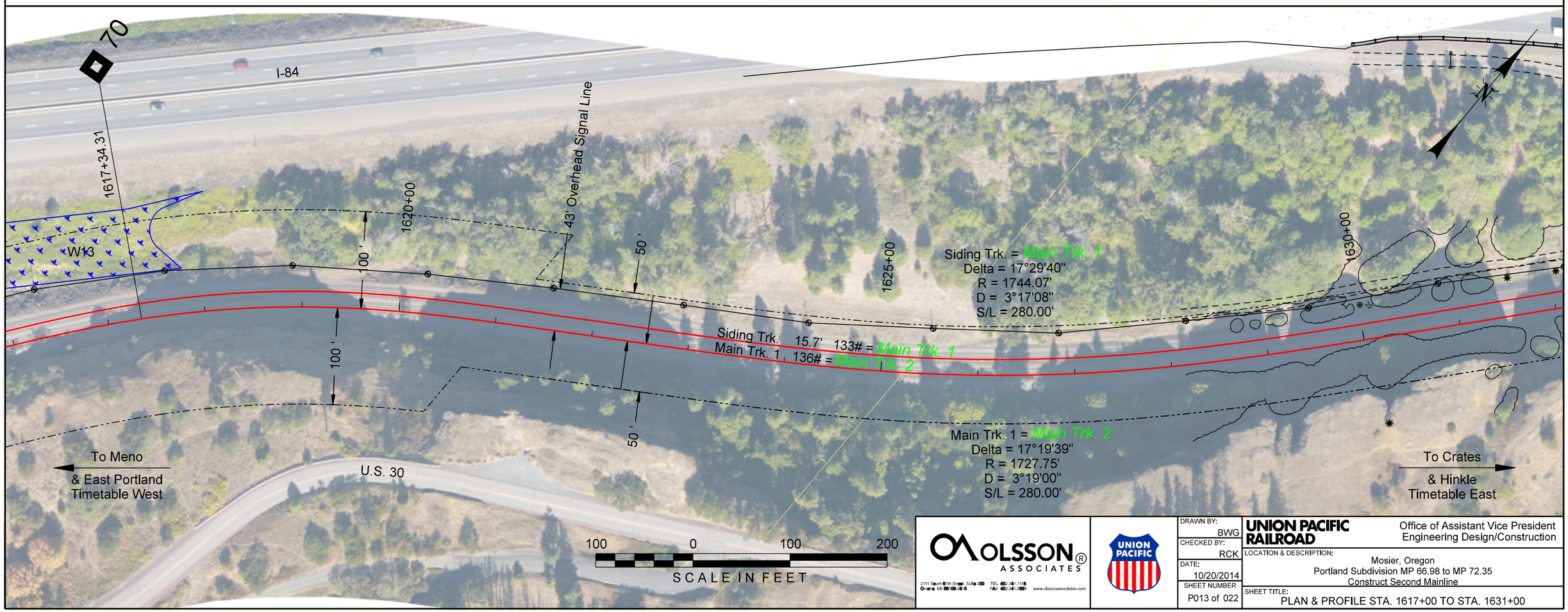
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1603+00 TO STA. 1617+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\02_Plan - Profile\067070 PP_012.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P013 of 022

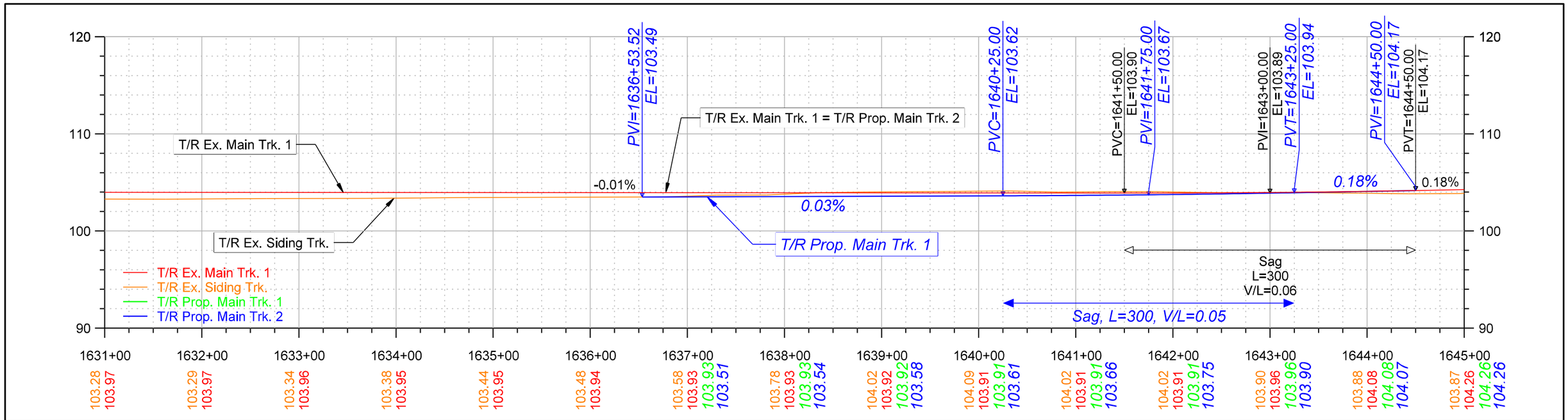
UNION PACIFIC RAILROAD

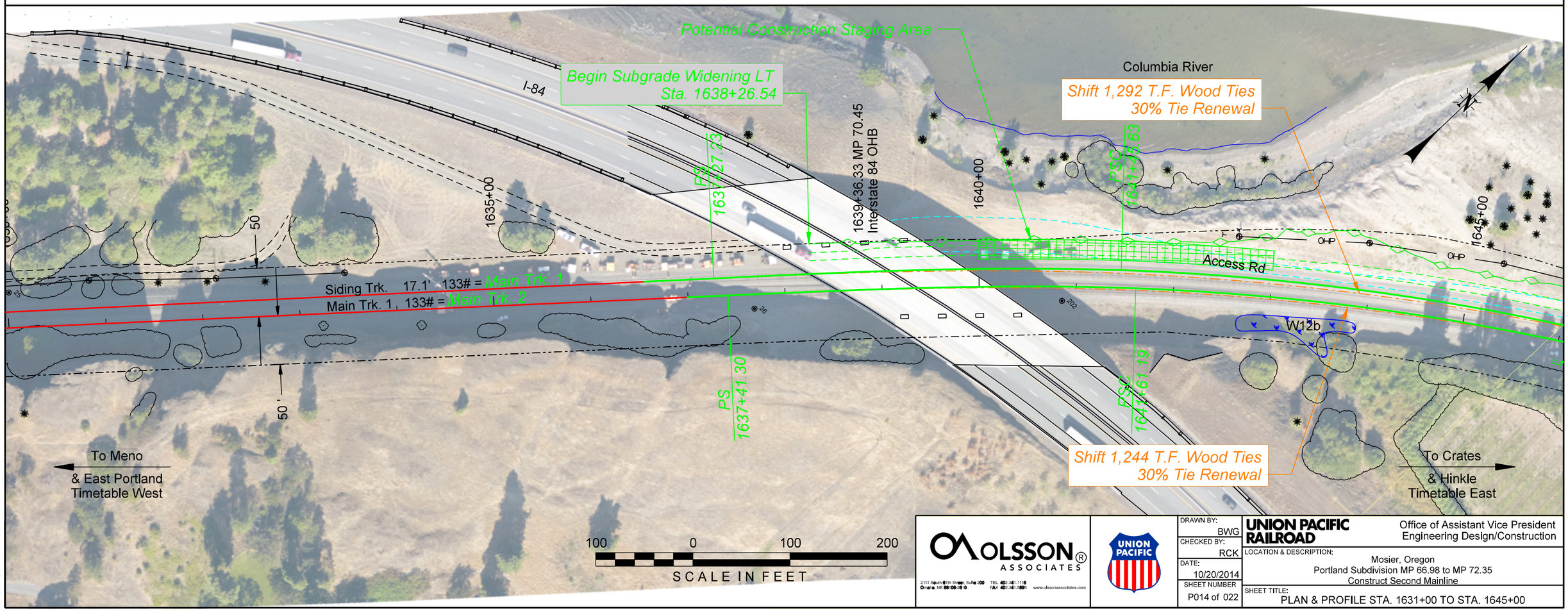
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1617+00 TO STA. 1631+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_013.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P014 of 022

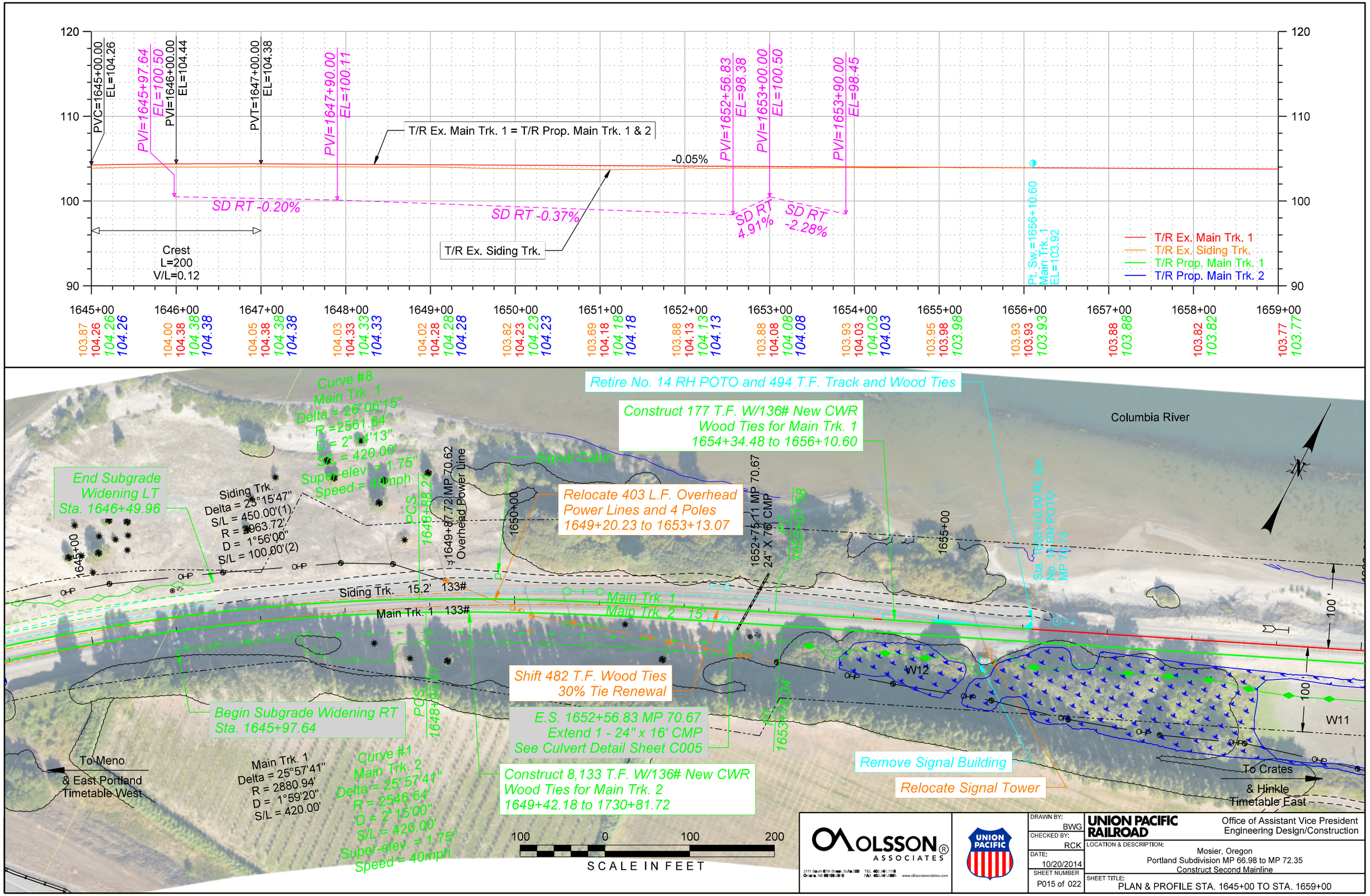
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

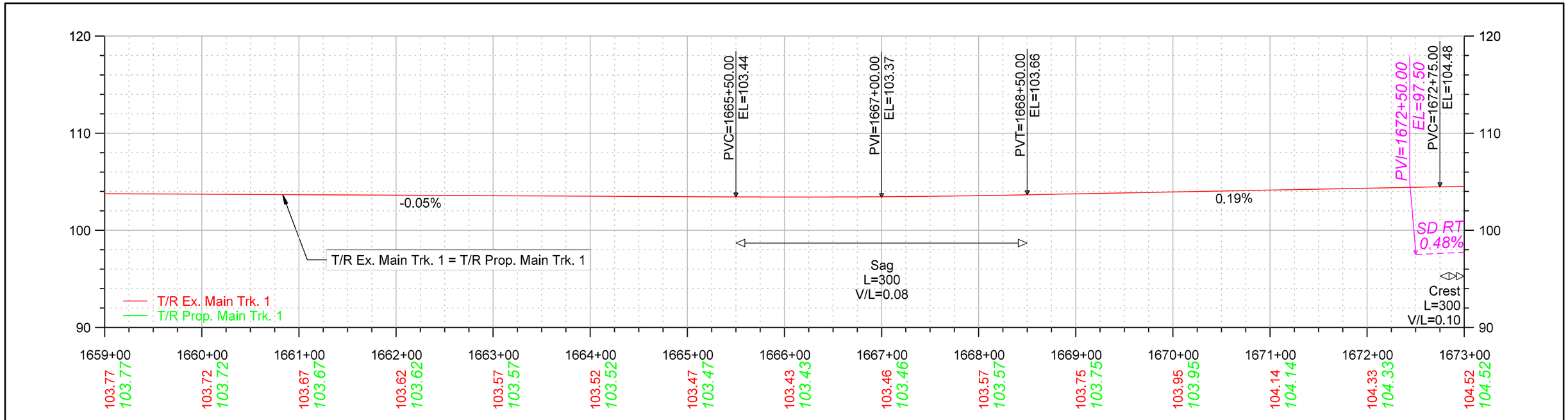
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

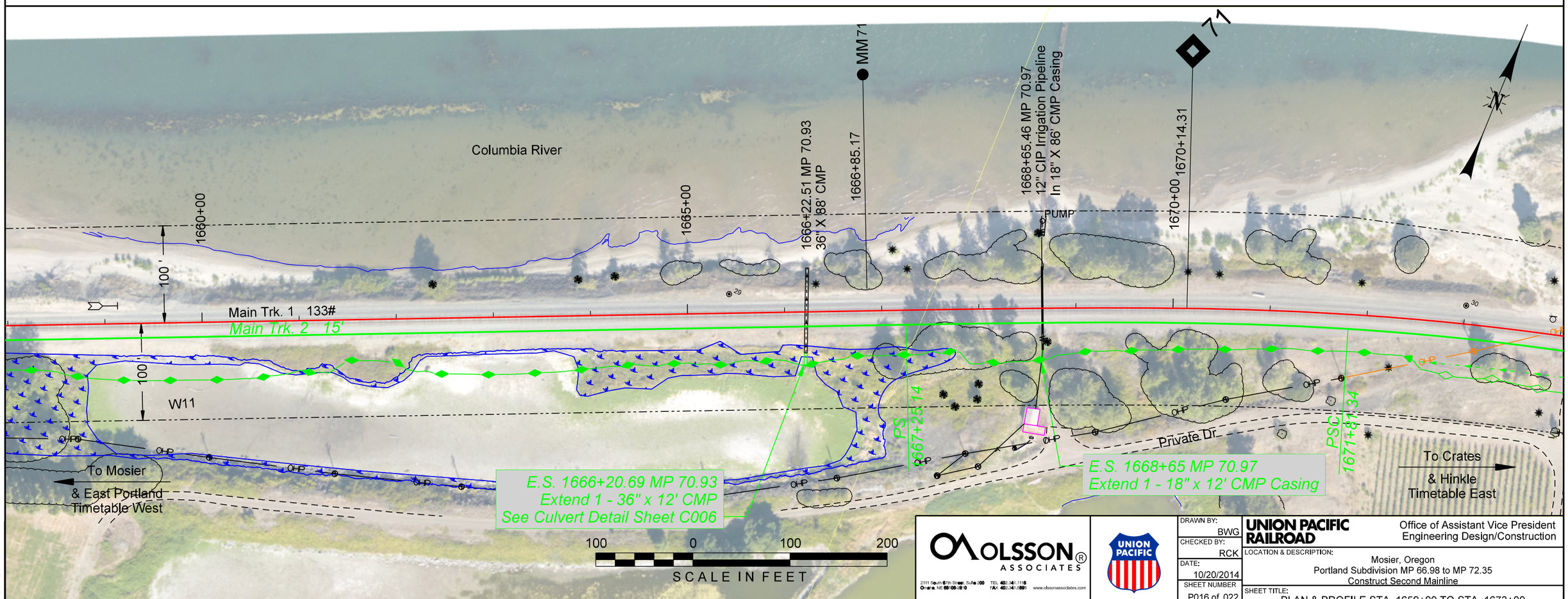
SHEET TITLE:
PLAN & PROFILE STA. 1631+00 TO STA. 1645+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_014.dgn
Default
10/20/2014



Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_015.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2910
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P016 of 022

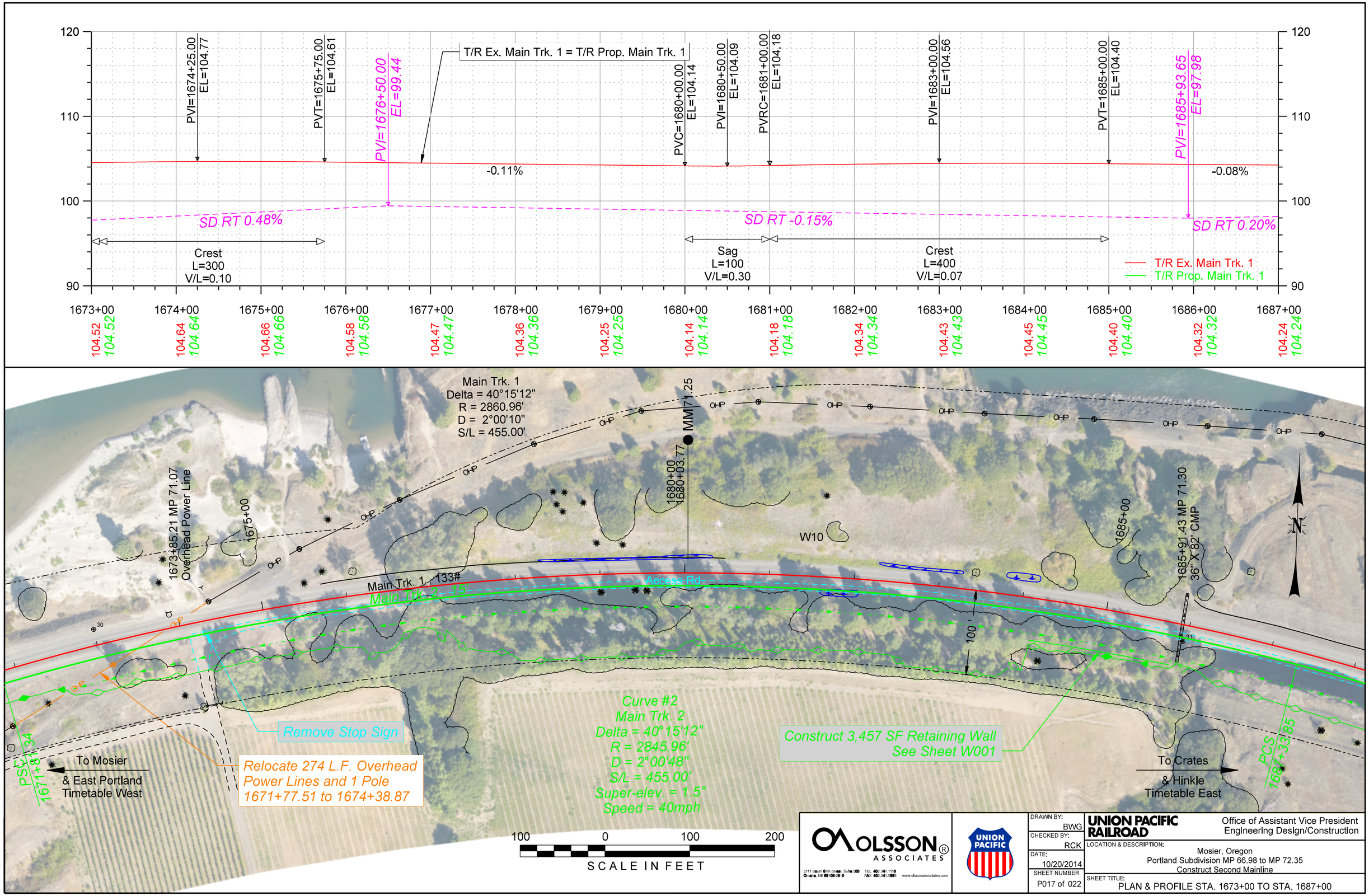
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1659+00 TO STA. 1673+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_016.dgn
Default
10/20/2014



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P017 of 022

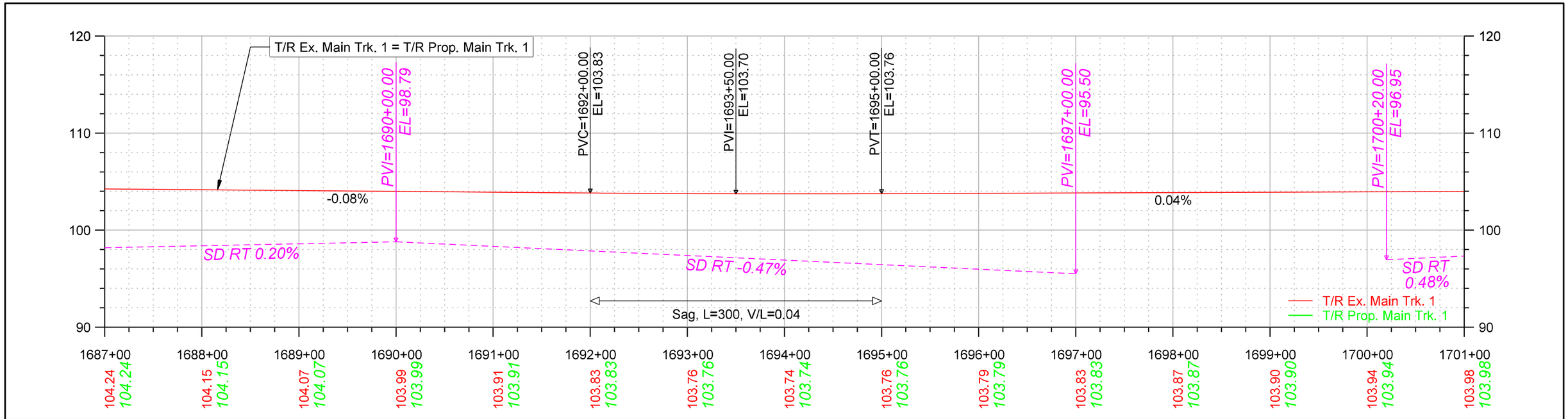
UNION PACIFIC RAILROAD

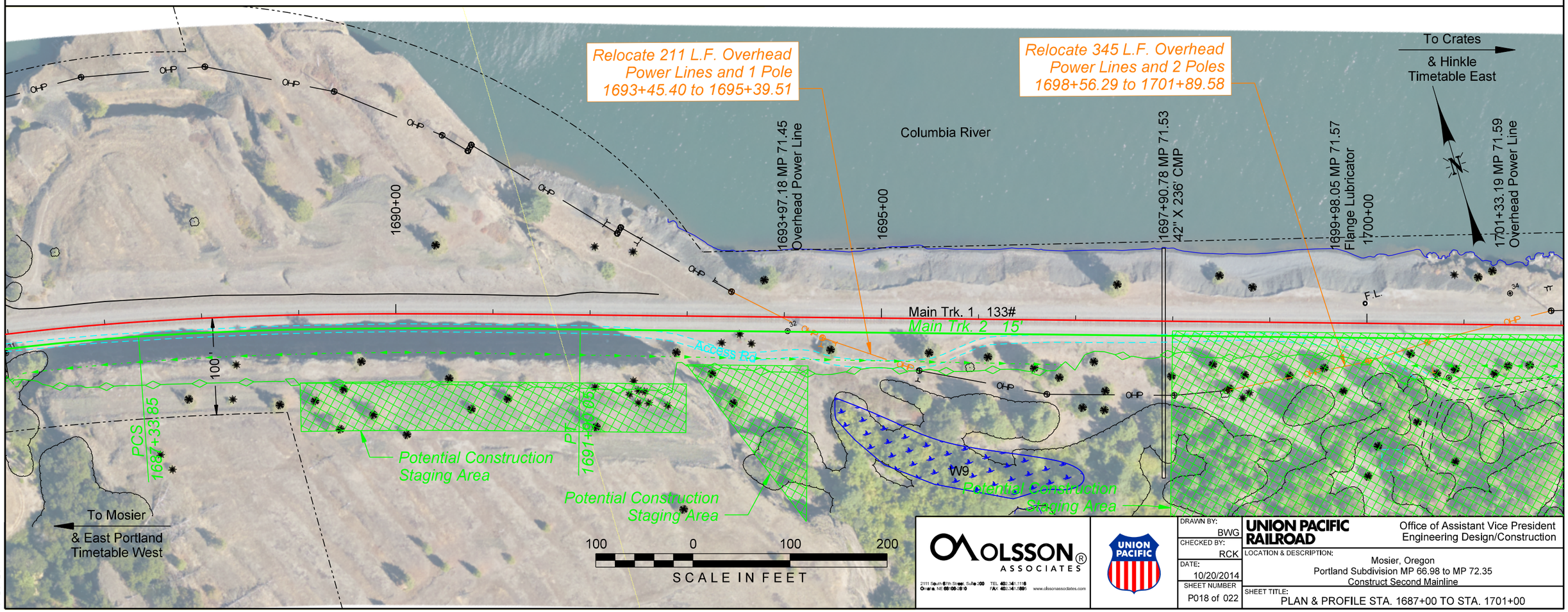
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1673+00 TO STA. 1687+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_017.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

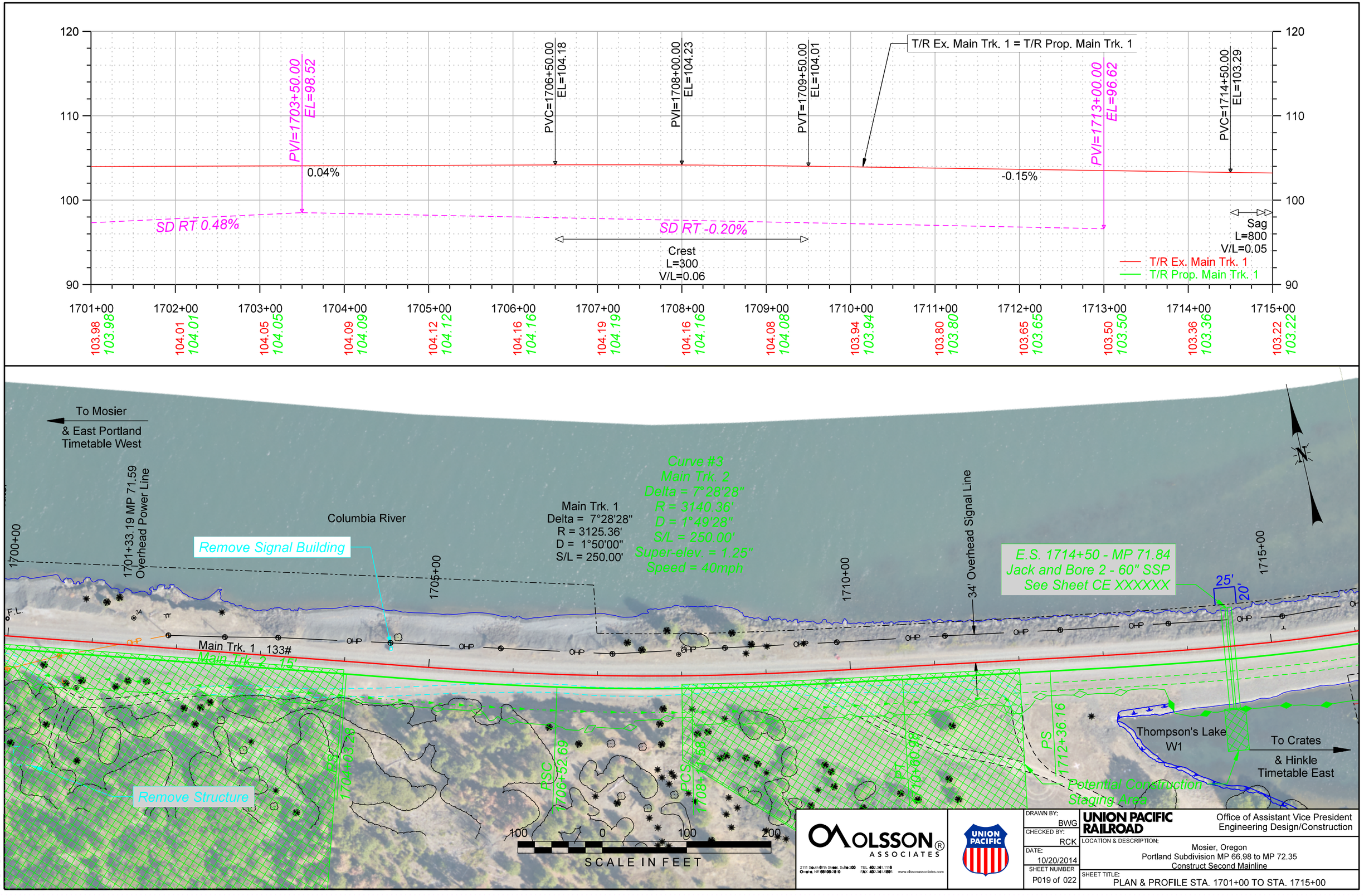
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P018 of 022

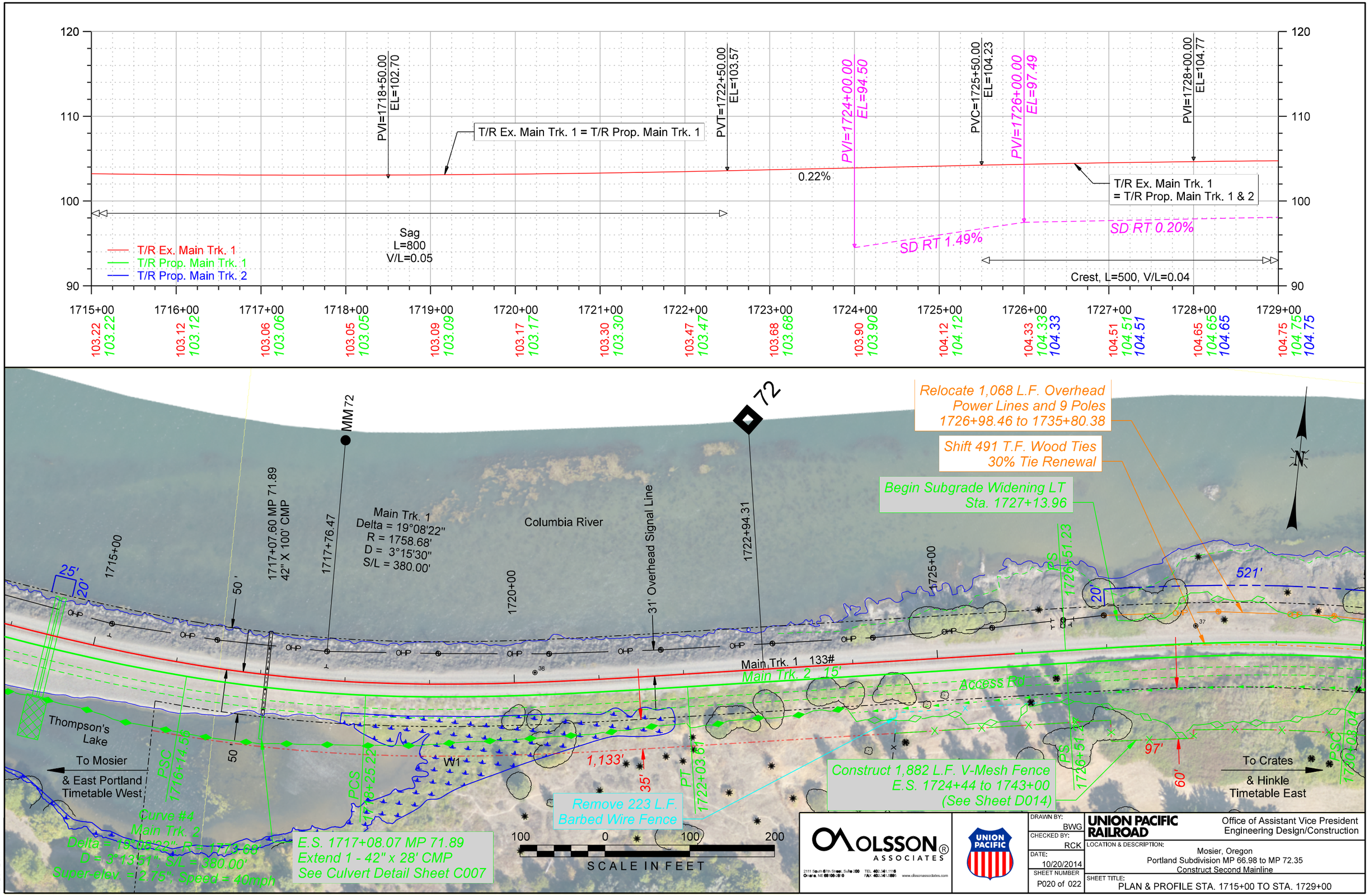
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

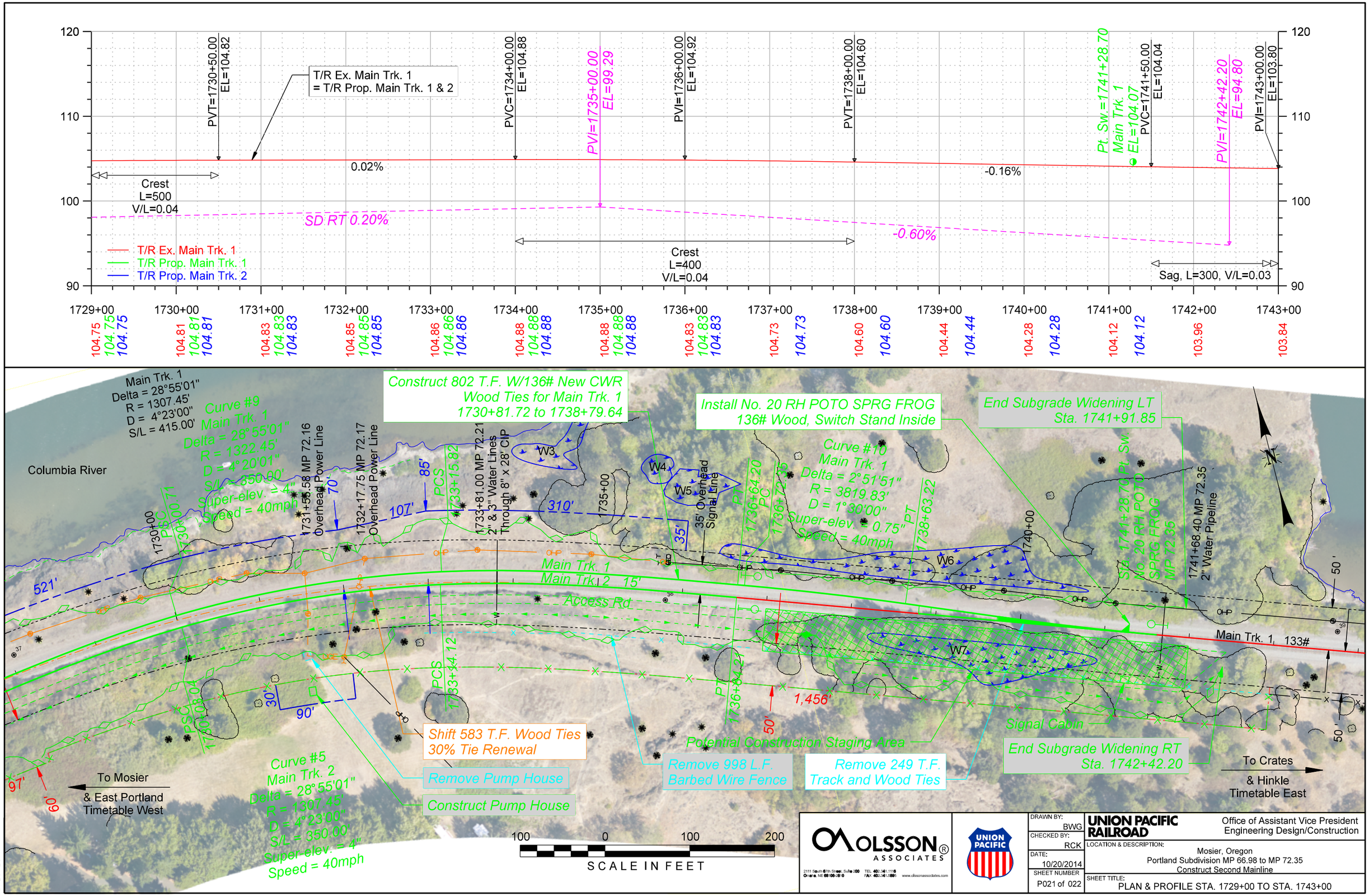
SHEET TITLE:
PLAN & PROFILE STA. 1687+00 TO STA. 1701+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_018.dgn
Default
10/20/2014

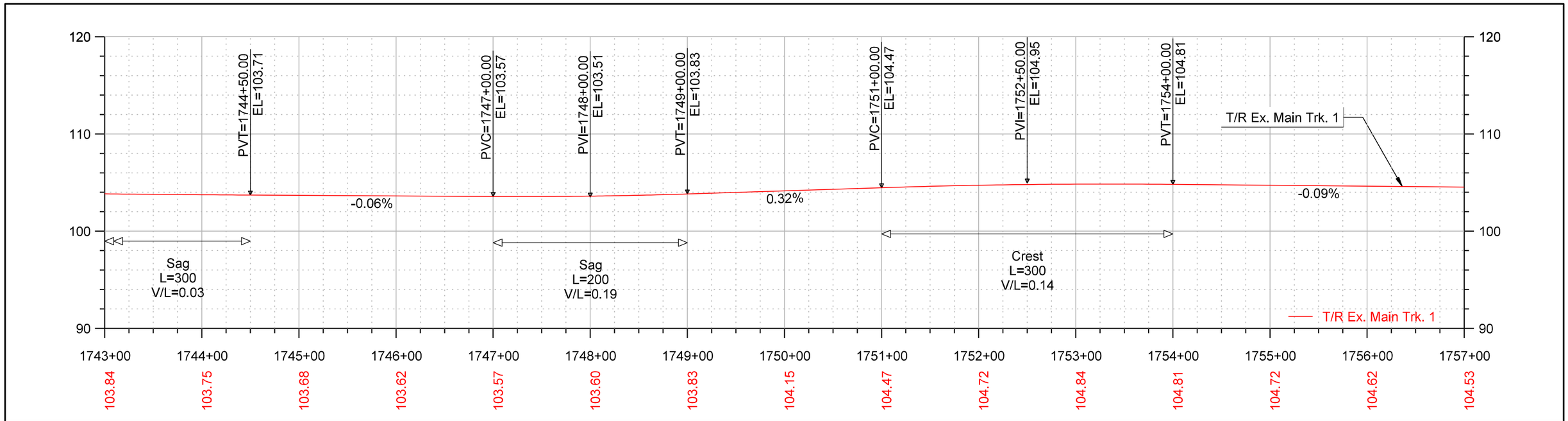

120
110
100
90
PVI=1703+50.00
EL=98.52
PVC=1706+50.00
EL=104.18
PVI=1708+00.00
EL=104.23
PVT=1709+50.00
EL=104.01
T/R Ex. Main Trk. 1 = T/R Prop. Main Trk. 1
PVI=1713+00.00
EL=96.62
PVC=1714+50.00
EL=103.29
0.04%
-0.15%
SD RT 0.48%
SD RT -0.20%
Crest
L=300
V/L=0.06
Sag
L=800
V/L=0.05
T/R Ex. Main Trk. 1
T/R Prop. Main Trk. 1
1701+00
1702+00
1703+00
1704+00
1705+00
1706+00
1707+00
1708+00
1709+00
1710+00
1711+00
1712+00
1713+00
1714+00
1715+00
103.98 103.98
104.01 104.01
104.05 104.05
104.09 104.09
104.12 104.12
104.16 104.16
104.19 104.19
104.16 104.16
104.08 104.08
103.94 103.94
103.80 103.80
103.65 103.65
103.50 103.50
103.36 103.36
103.22 103.22
To Mosier
& East Portland
Timetable West
1701+33.19 MP 71.59
Overhead Power Line
Columbia River
Remove Signal Building
Main Trk. 1
Delta = 7°28'28"
R = 3125.36'
D = 1°50'00"
S/L = 250.00'
Curve #3
Main Trk. 2
Delta = 7°28'28"
R = 3140.36'
D = 1°49'28"
S/L = 250.00'
Super-elev. = 1.25"
Speed = 40mph
34' Overhead Signal Line
E.S. 1714+50 - MP 71.84
Jack and Bore 2 - 60" SSP
See Sheet CE XXXXXX
25'
20'
1700+00
1705+00
1710+00
1715+00
F.L.
Main Trk. 1 133#
Main Trk. 2 15'
Remove Structure
PS
1704+03.23
PSC
1706+52.69
PCS
1708+
PT
1710+60.98
PS
1712+36.16
Thompson's Lake
W1
To Crates
& Hinkle
Timetable East
Potential Construction
Staging Area
100 0 100 200
SCALE IN FEET
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com
UNION PACIFIC
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER P019 of 022
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline
SHEET TITLE:
PLAN & PROFILE STA. 1701+00 TO STA. 1715+00
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_019.dgn
Default
10/20/2014

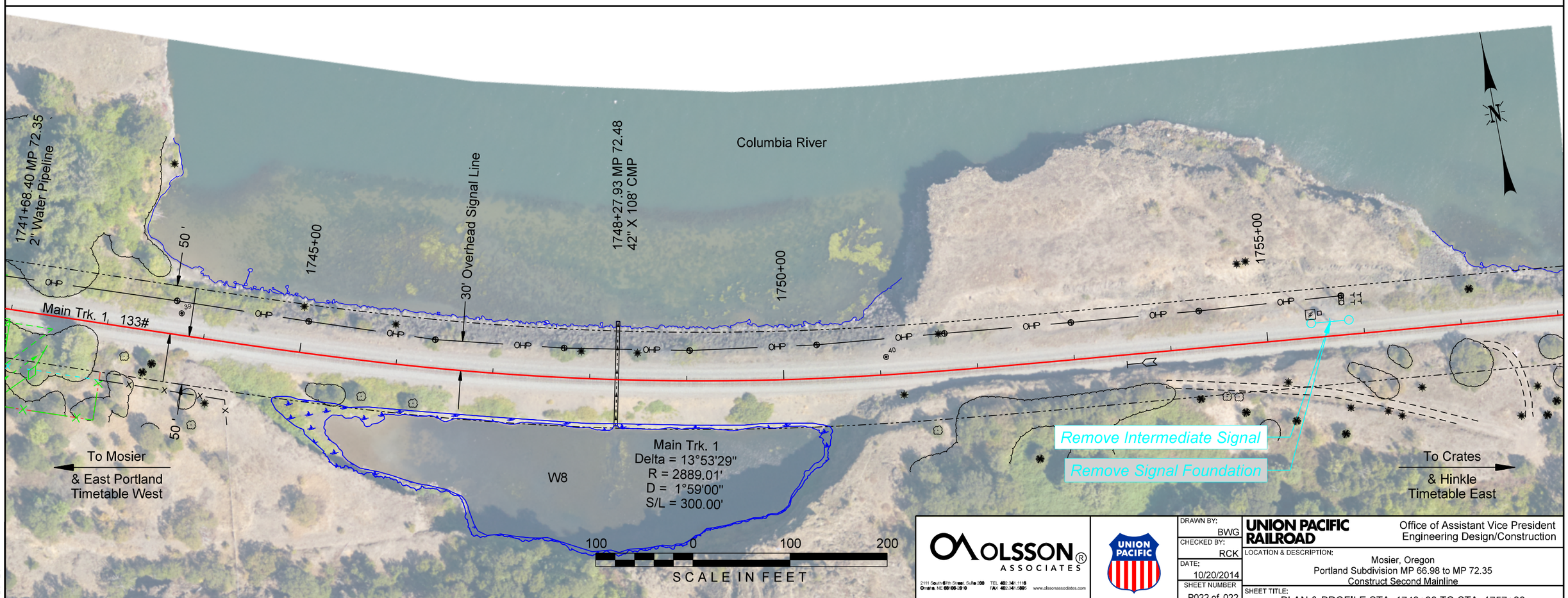


Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_020.dgn
Default
10/20/2014



Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_021.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	P022 of 022

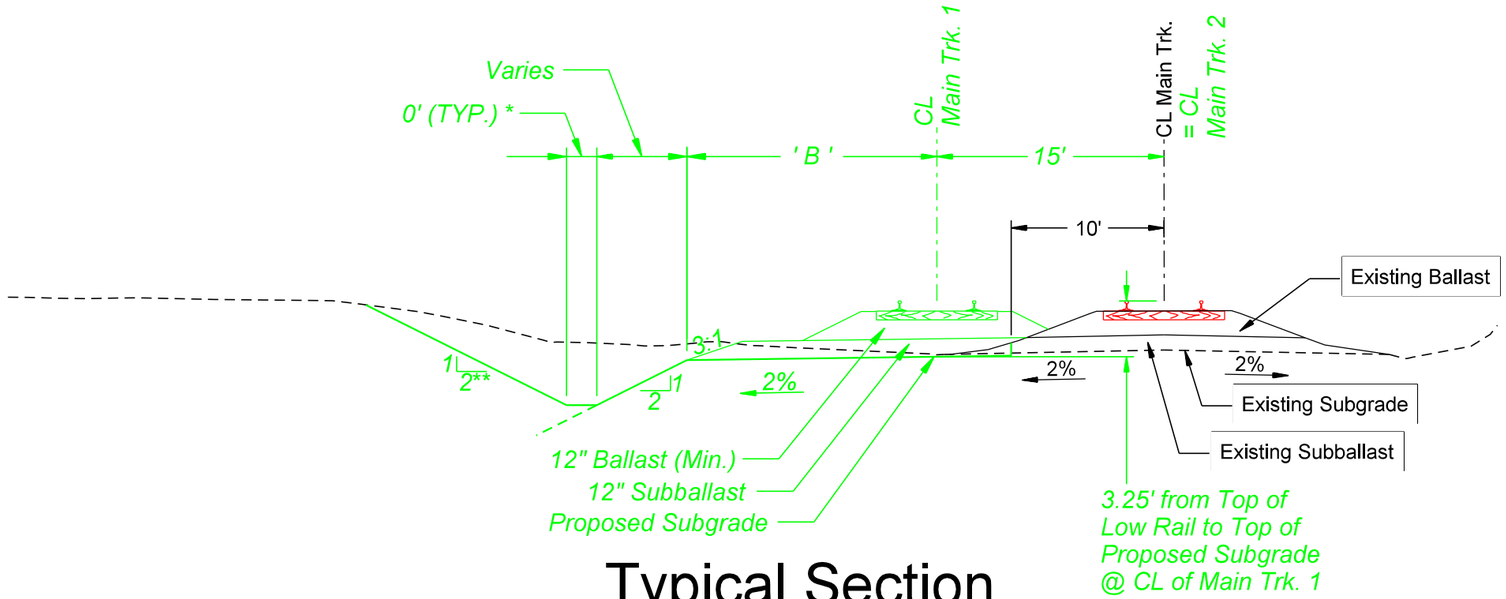
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
PLAN & PROFILE STA. 1743+00 TO STA. 1757+00

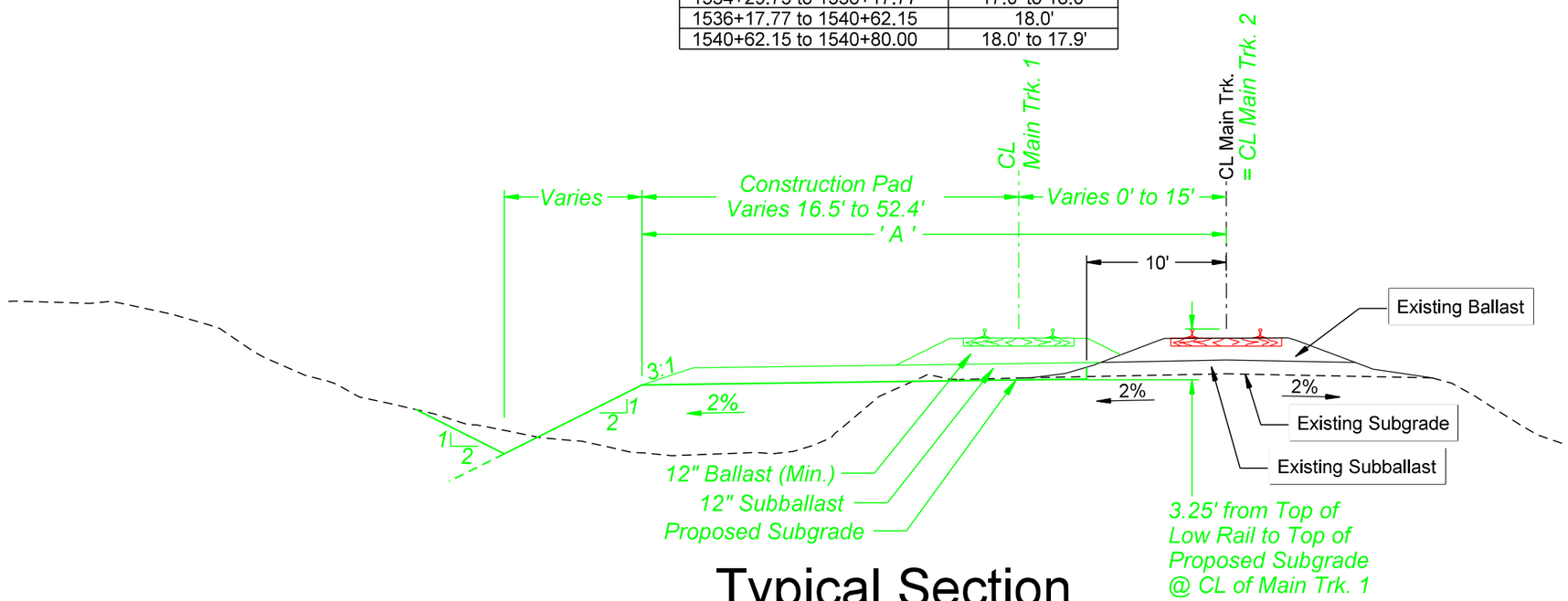
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\02_Plan - Profile\070073 PP_022.dgn
Default
10/20/2014



Typical Section

STA. TO STA.	' B '
1464+13.50 to 1530+09.88	16.5'
1530+09.88 to 1531+59.45	16.5' to 17.0'
1531+59.45 to 1534+29.75	17.0'
1534+29.75 to 1536+17.77	17.0' to 18.0'
1536+17.77 to 1540+62.15	18.0'
1540+62.15 to 1540+80.00	18.0' to 17.9'

* 2' Flat Bottom Ditch from Sta. 1504+00.00 to Sta. 1523+00.00
** Slope Varies Over the Following Station Ranges:
Sta. 1466+33.40 to Sta. 1468+91.54
Sta. 1474+79.43 to Sta. 1477+73.47
Sta. 1501+63.21 to Sta. 1502+28.14
Sta. 1535+76.26 to Sta. 1537+83.40
See Cross Sections for Slope.



Typical Section

STA. TO STA.	' A '
1457+54.66 to 1457+91.00	16.5' to 52.4'
1457+91.00 to 1458+44.00	52.4'
1458+44.00 to 1464+10.00	35.0'
1464+10.00 to 1464+13.50	35.0' to 31.5'

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

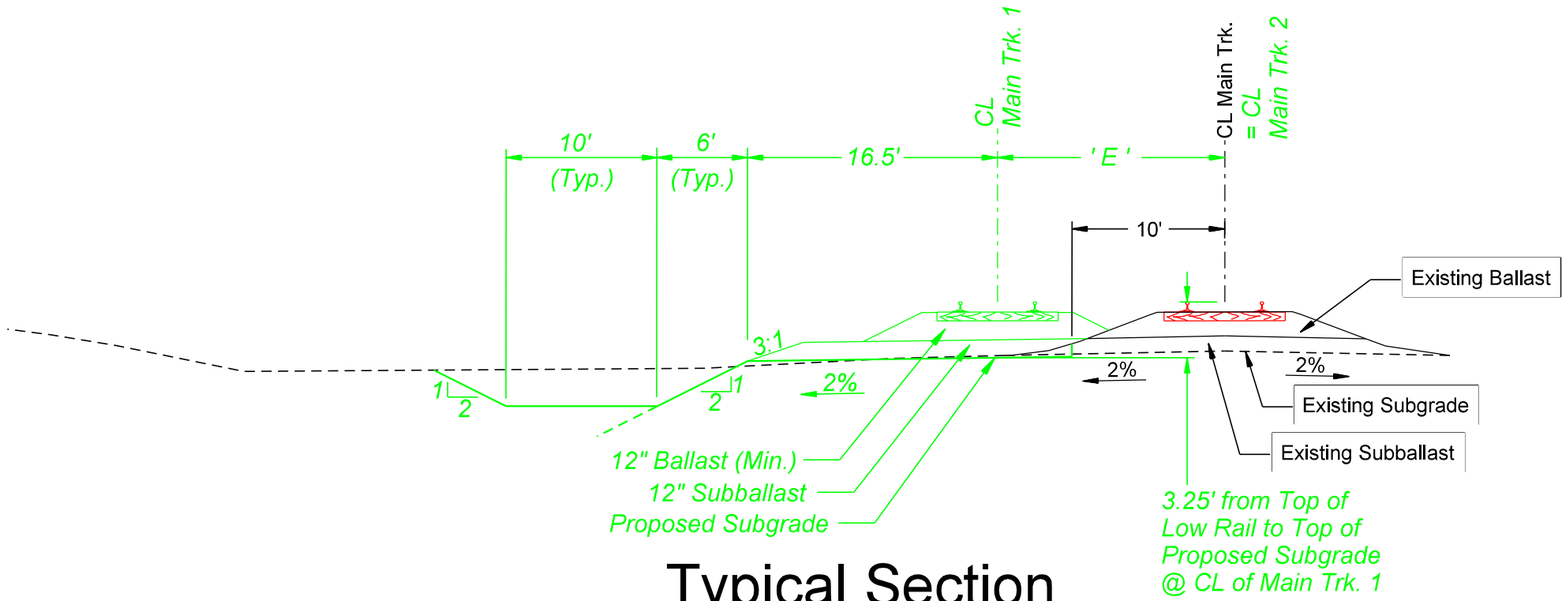
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: T 001 of 009

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

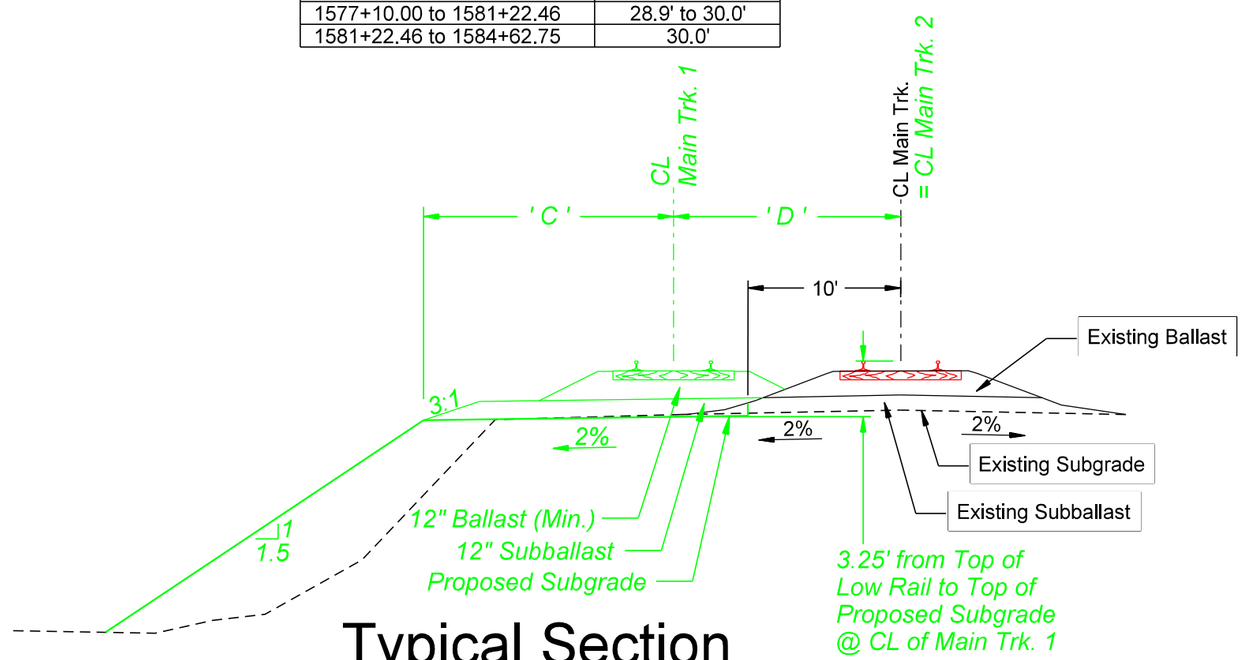
SHEET TITLE:
TYPICAL SECTIONS

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\ipwrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\03_Typicals\067070 Typicals.dgn
Default
10/20/2014



Typical Section

STA. TO STA.	' E '
1552+60.00 to 1563+00.00	15.0'
1564+80.00 to 1565+30.00	15.0'
1572+50.00 to 1575+00.00	21.5' to 26.4'
1577+10.00 to 1581+22.46	28.9' to 30.0'
1581+22.46 to 1584+62.75	30.0'



Typical Section

STA. TO STA.	' C '	' D '
1540+80.00 to 1543+26.14	17.9' to 16.5'	15.0'
1543+26.14 to 1552+60.00	16.5'	15.0'
1567+10.00 to 1567+97.32	16.5'	15.0'
1567+97.32 to 1572+50.00	16.5'	15.0' to 21.5'
1575+00.00 to 1577+10.00	16.5'	26.4' to 28.9'

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: T 002 of 009

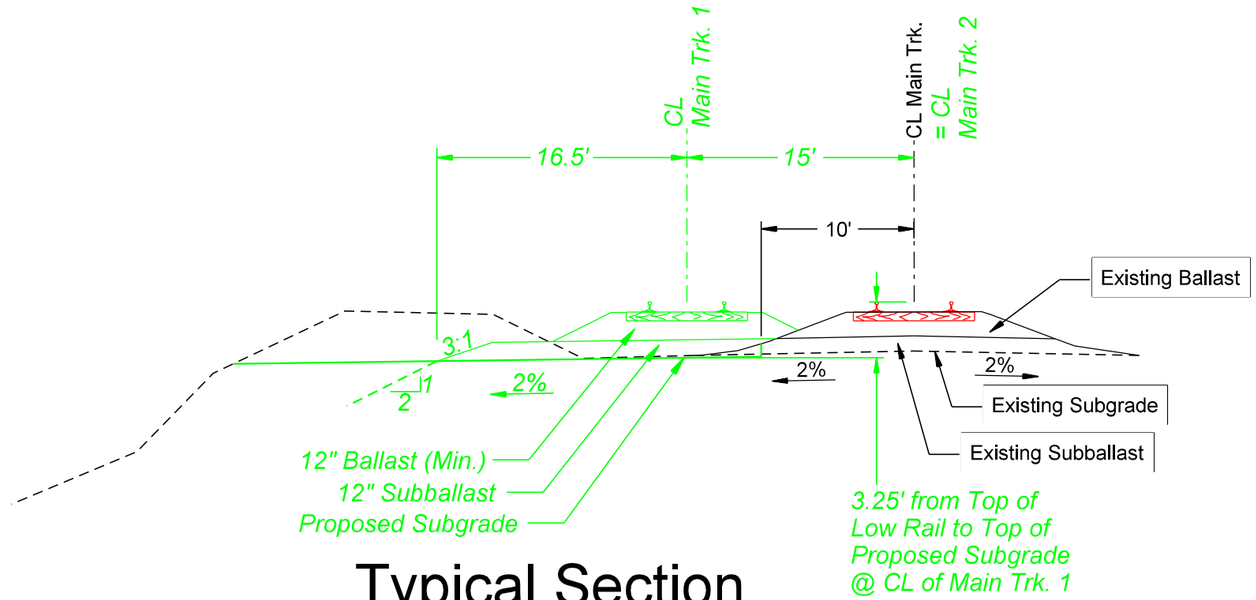
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

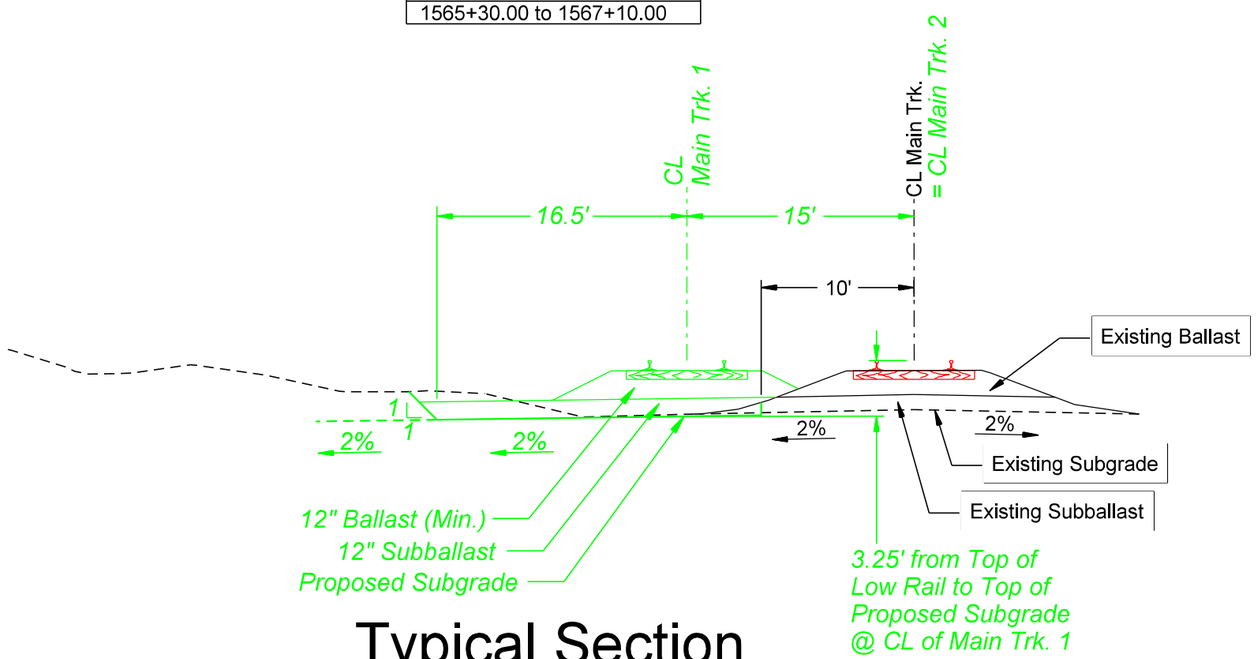
SHEET TITLE:
TYPICAL SECTIONS

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\ipaprn\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\03_Typicals\067070 Typicals.dgn
Default
10/20/2014



Typical Section

STA. TO STA.
1552+60.00 to 1563+00.00
1565+30.00 to 1567+10.00



Typical Section

Sta. 1563+00.00 to Sta. 1564+80.00

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	T 003 of 009

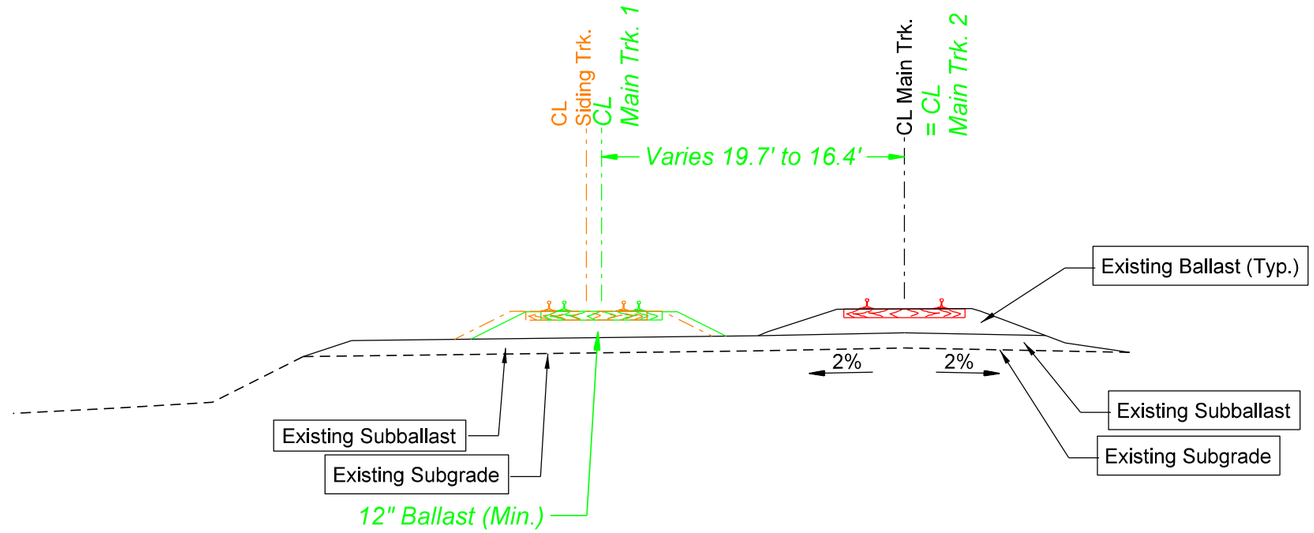
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

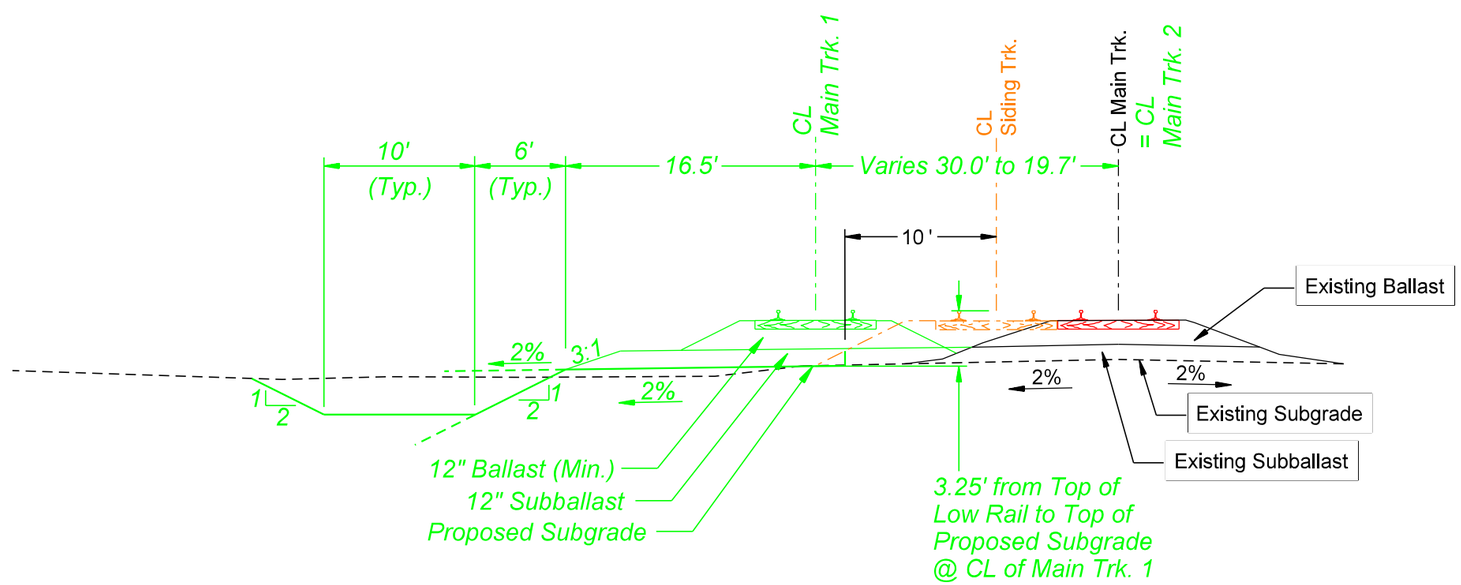
SHEET TITLE:
TYPICAL SECTIONS

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\03_Typicals\067070 Typicals.dgn
Default
10/20/2014



Typical Section

Sta. 1589+52.23 to Sta. 1592+52.72



Typical Section

Sta. 1584+62.75 to Sta. 1589+52.23

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	T 004 of 009

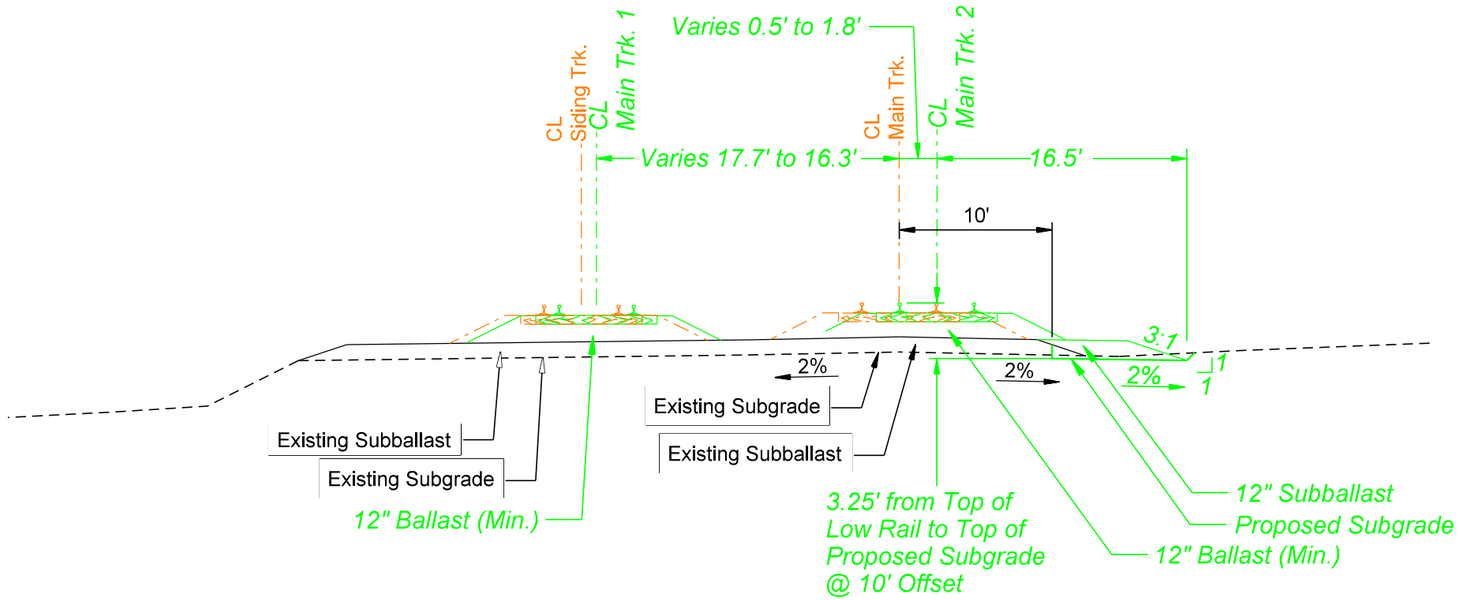
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
TYPICAL SECTIONS

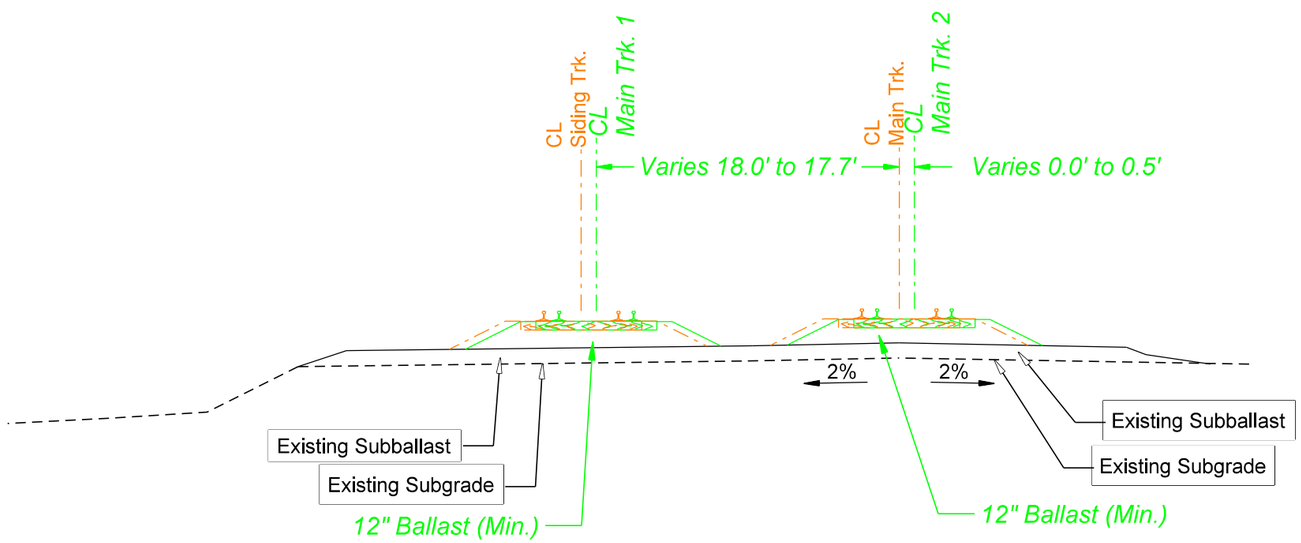
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\03_Typicals\067070 Typicals.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\03_Typicals\067070 Typicals.dgn



Typical Section

Sta. 1638+84.85 to Sta. 1640+50.00



Typical Section

Sta. 1636+53.52 to Sta. 1638+84.85

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	T 005 of 009

UNION PACIFIC RAILROAD

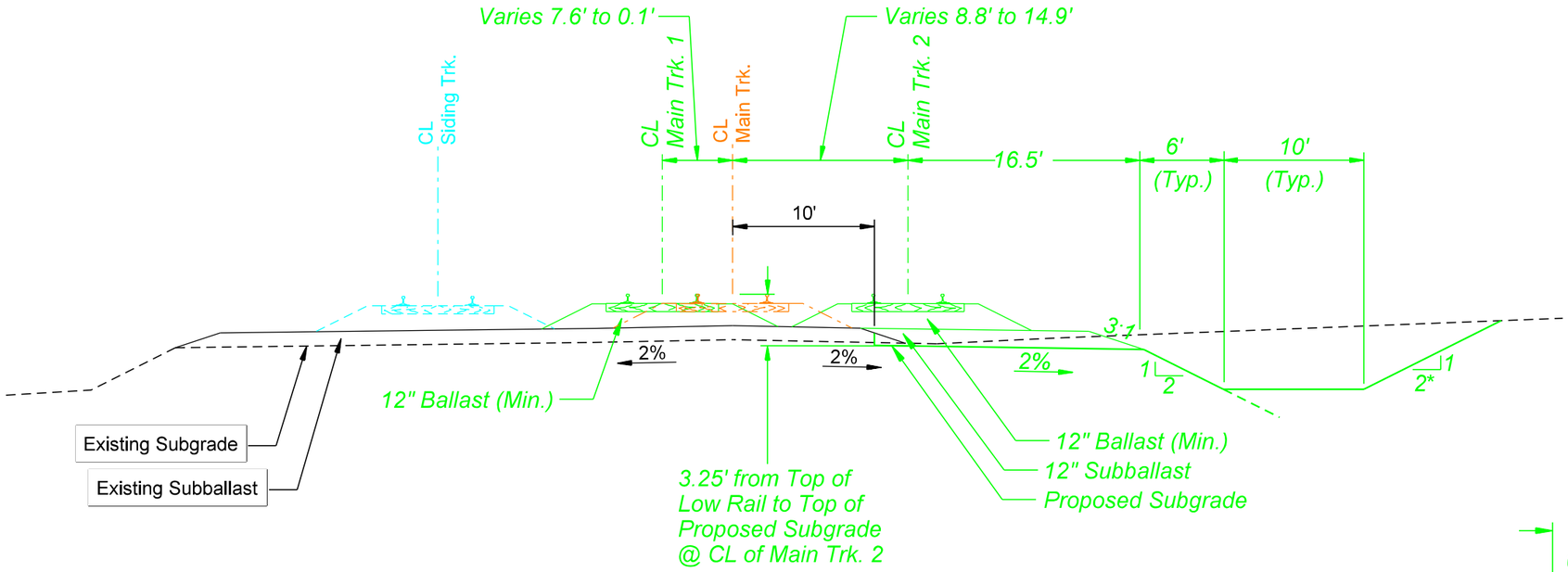
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
TYPICAL SECTIONS

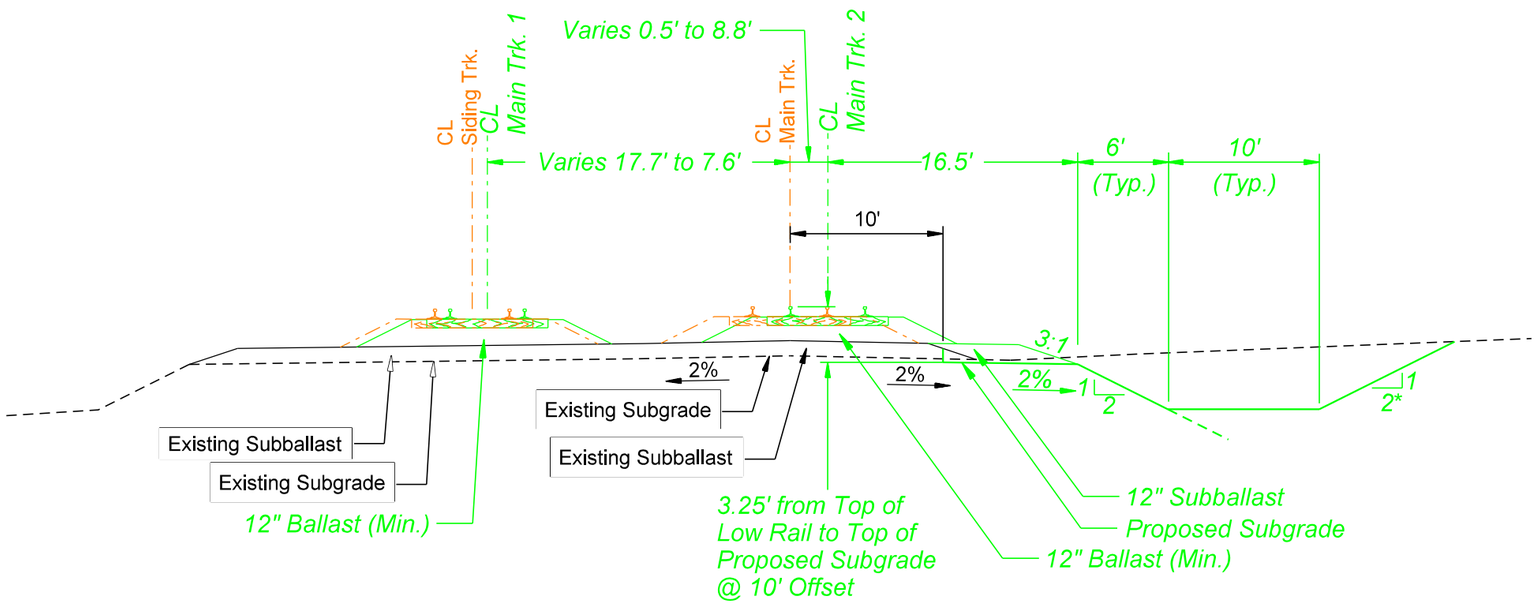
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn



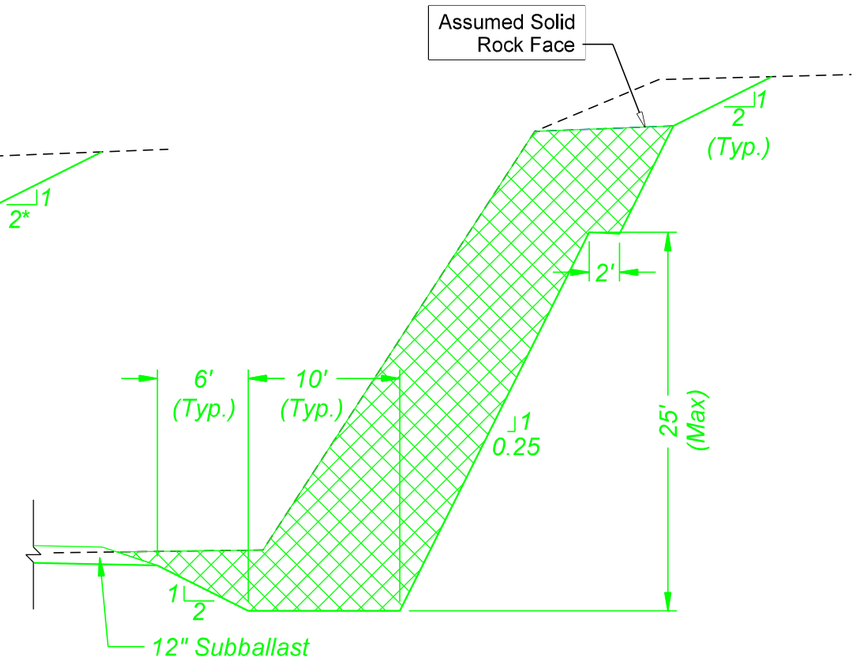
Typical Section

Sta. 1646+76.80 to Sta. 1654+00.00



Typical Section

Sta. 1640+50.00 to Sta. 1646+76.80



Rock Excavation

STA. TO STA.
1643+70.00 to 1647+50.00
1677+10.00 to 1684+70.00
1686+10.00 to 1692+95.00
1704+00.00 to 1708+11.58
1726+00.00 to 1736+00.00

* See Rock Excavation Detail This Sheet

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	T 006 of 009

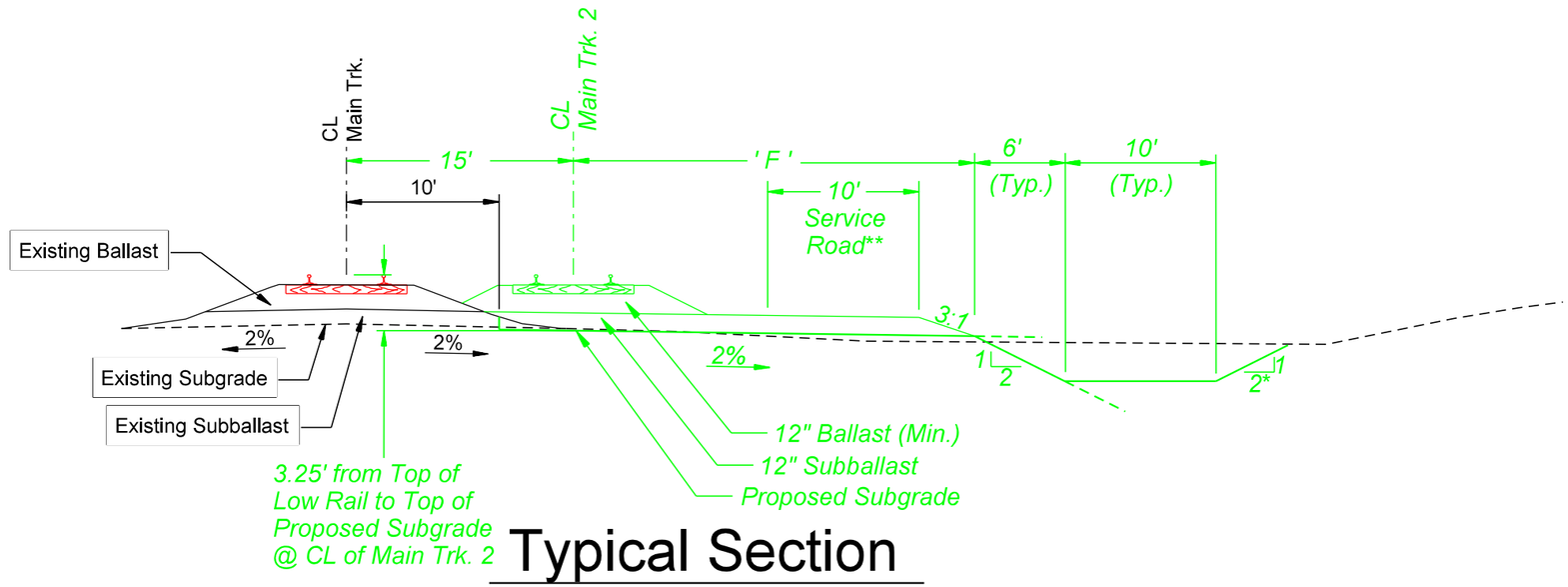
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
TYPICAL SECTIONS

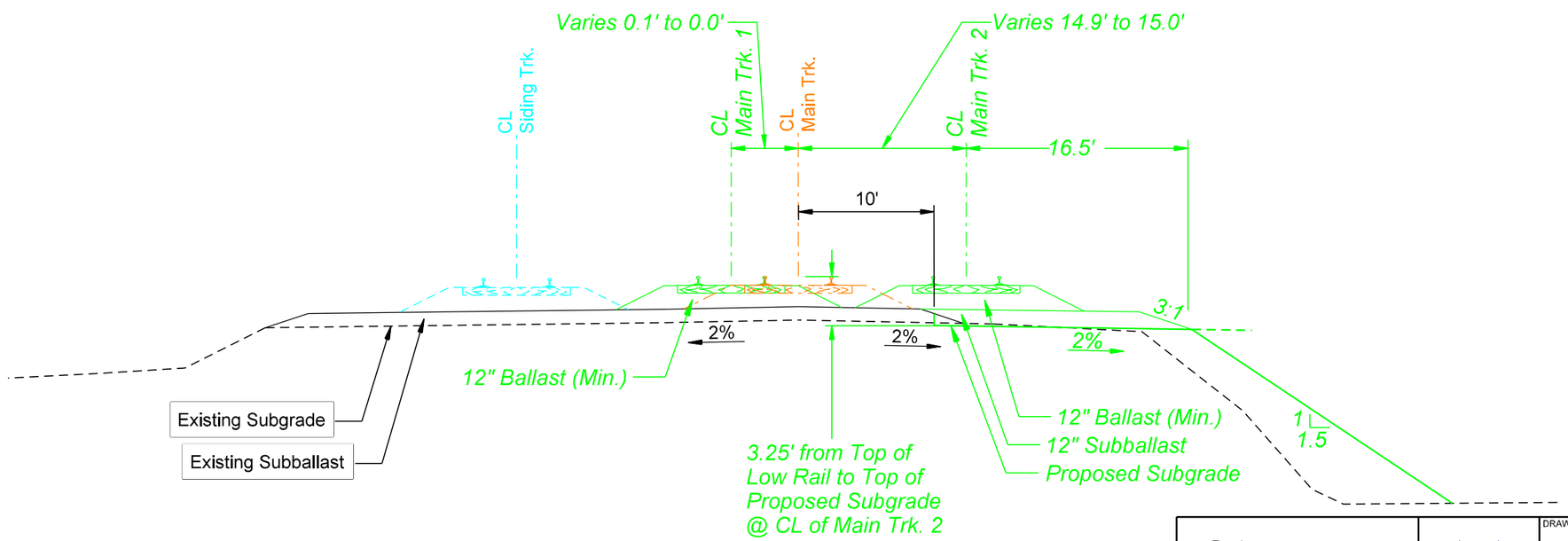
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn



Typical Section

STA. TO STA.	' F '
1667+80.00 to 1704+03.28	16.5'
1704+03.28 to 1706+52.69	16.5' to 17.5'
1706+52.69 to 1708+11.58	17.5'
1708+11.58 to 1710+60.98	17.5' to 16.5'
1710+60.98 to 1711+80.00	16.5'
1711+80.00 to 1711+90.00	16.5' to 26.5'
1711+90.00 to 1712+36.16	26.5'
1712+36.16 to 1713+60.00	26.5' to 27.0'
1722+03.61 to 1725+91.23	26.5'



Typical Section

Sta. 1654+00.00 to Sta. 1656+10.60

* See Rock Excavation Detail on Sheet T006
** Service Road from Sta. 1711+90.00 to 1725+91.23 only

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

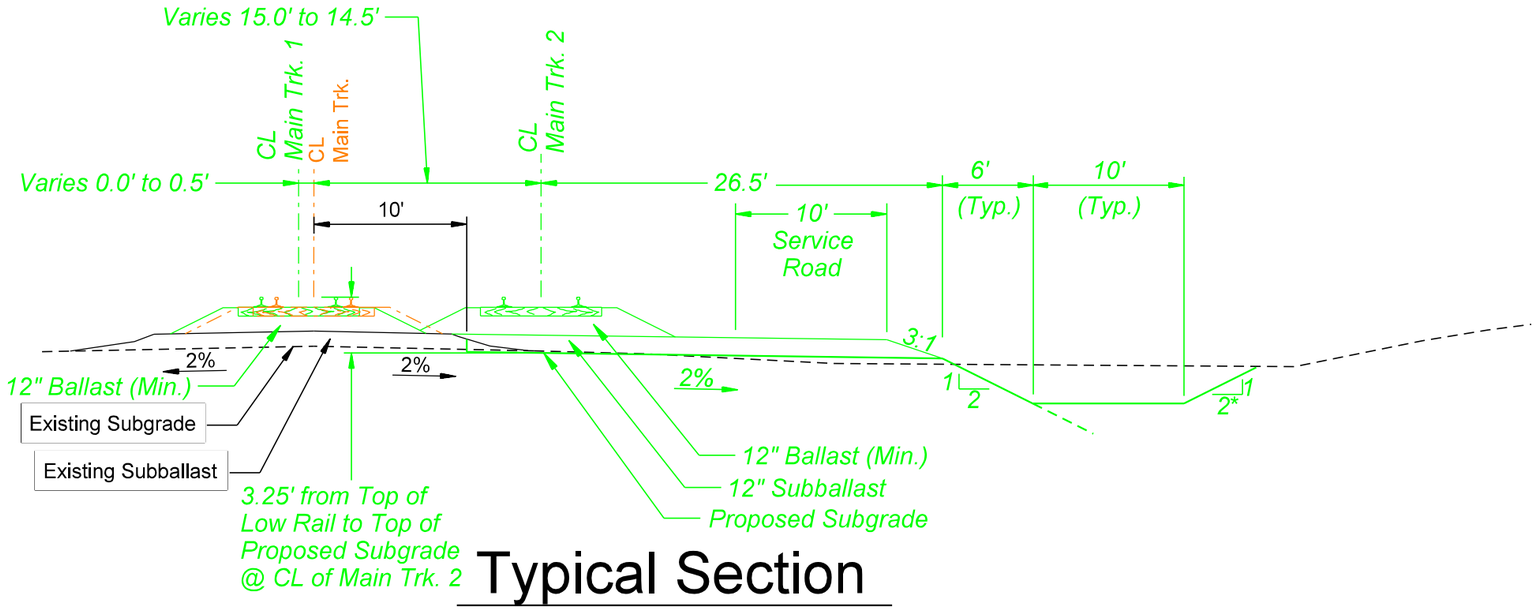
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	T 007 of 009

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

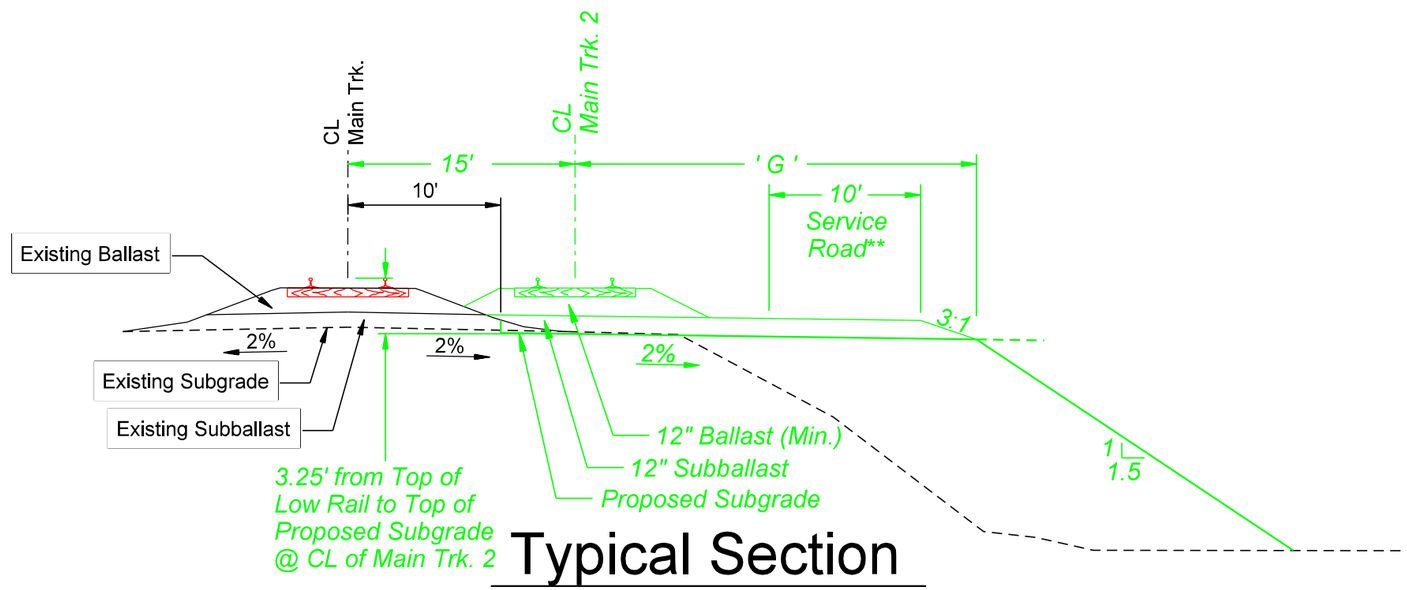
SHEET TITLE:
TYPICAL SECTIONS

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn
Default
10/20/2014



Typical Section

Sta. 1725+91.23 to Sta. 1727+13.96



Typical Section

STA. TO STA.	' G '
1656+10.60 to 1667+80.00	16.5'
1713+60.00 to 1716+14.56	27.0' to 28.0'
1716+14.56 to 1718+25.22	28.0'
1718+25.22 to 1722+03.61	28.0' to 26.5'

* See Rock Excavation Detail on Sheet T006
** Service Road from Sta. 1711+90.00 to 1725+91.23 only

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: T 008 of 009

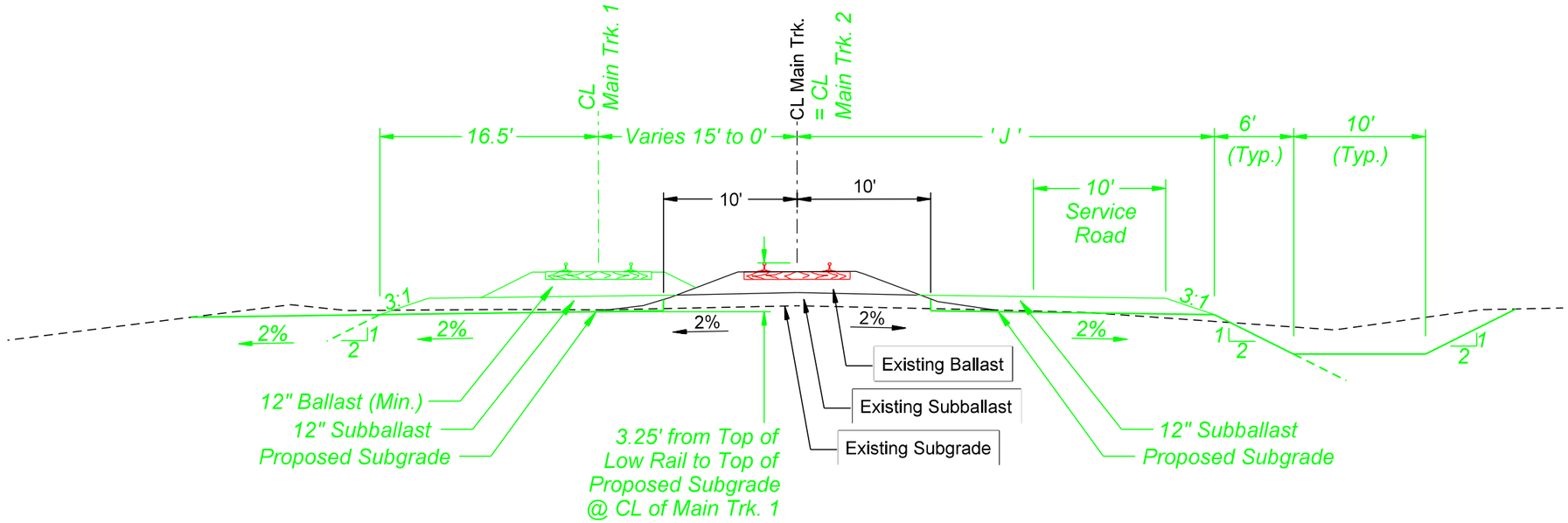
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
TYPICAL SECTIONS

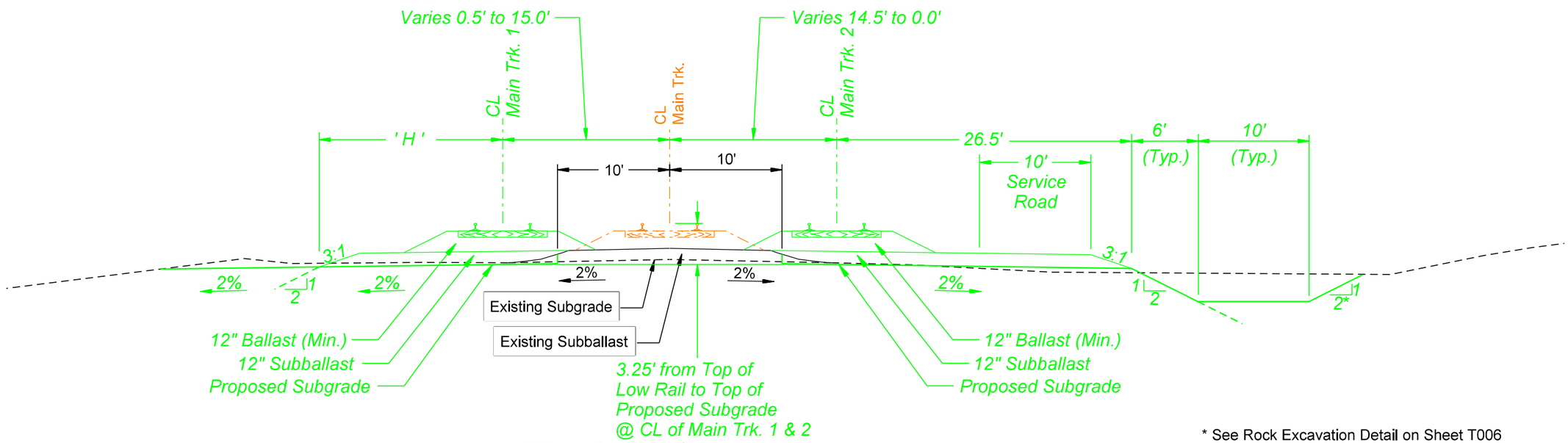
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn



Typical Section

STA. TO STA.	' J '
1736+64.21 to 1737+61.50	26.5'
1737+61.50 to 1738+00.00	26.5' to 65.0'
1738+00.00 to 1741+93.70	65.0'
1741+93.70 to 1742+42.21	65.0' to 16.5'



* See Rock Excavation Detail on Sheet T006

Typical Section

STA. TO STA.	' H '
1727+13.96 to 1730+00.71	16.9' to 18.5'
1730+00.71 to 1733+15.82	18.5'
1733+15.82 to 1736+64.21	18.5' to 16.5'

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

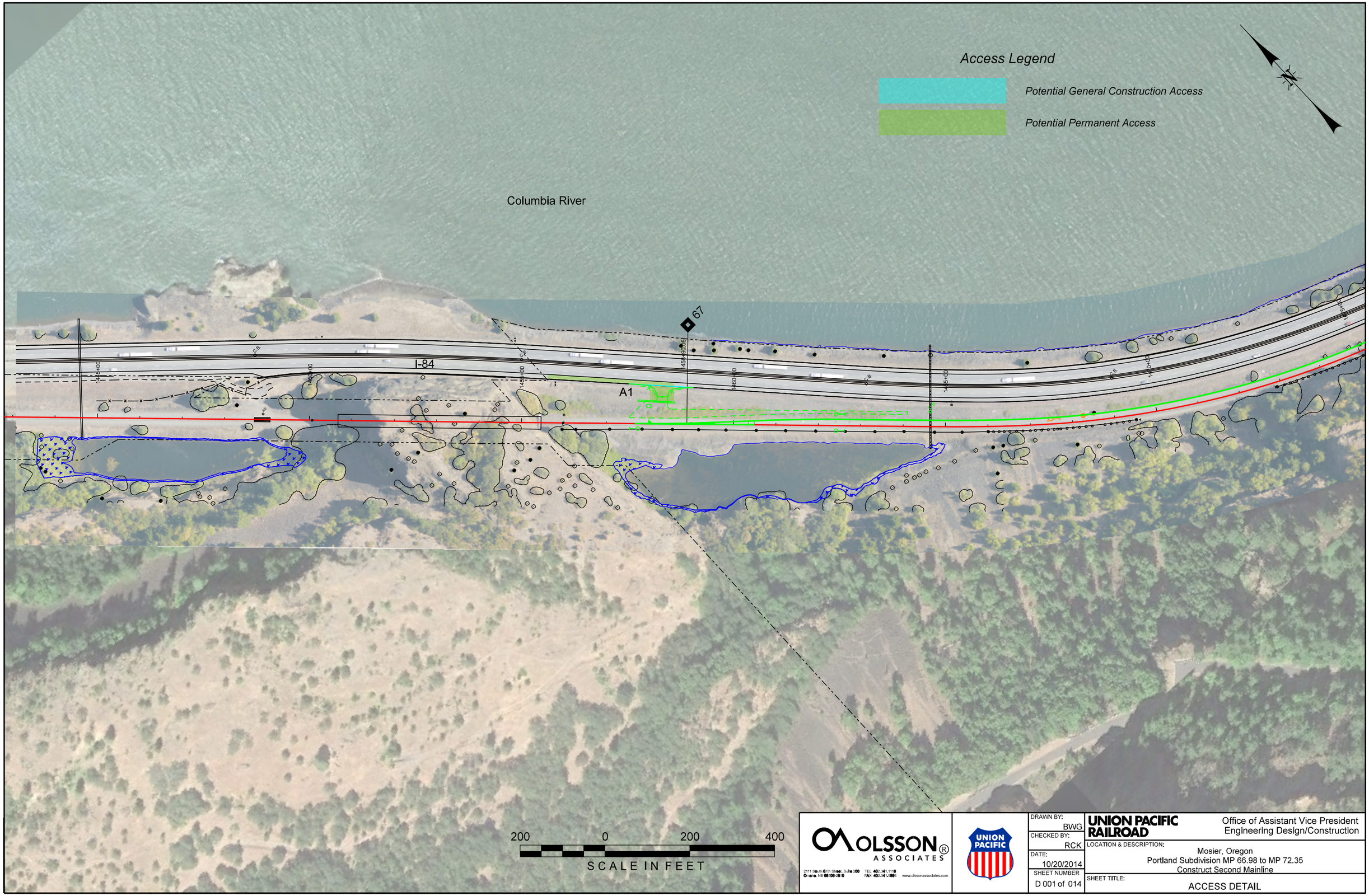
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: T 009 of 009

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
TYPICAL SECTIONS

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\ipwrm\CAD_Config\Bentley Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\03_Typicals\070073 Typicals.dgn
Default
10/20/2014



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 001 of 014

UNION PACIFIC RAILROAD

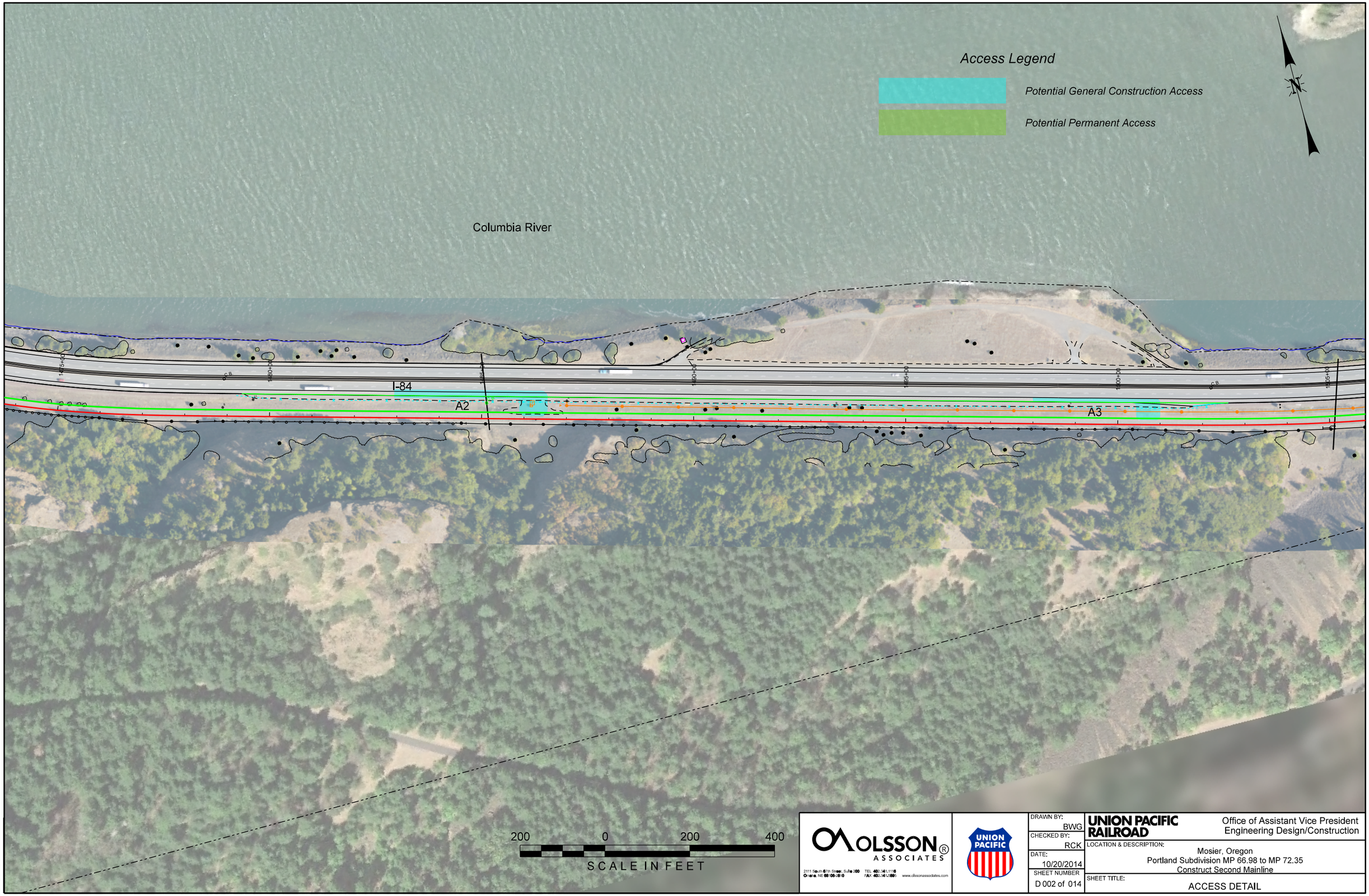
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-001.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-001.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 002 of 014

UNION PACIFIC RAILROAD

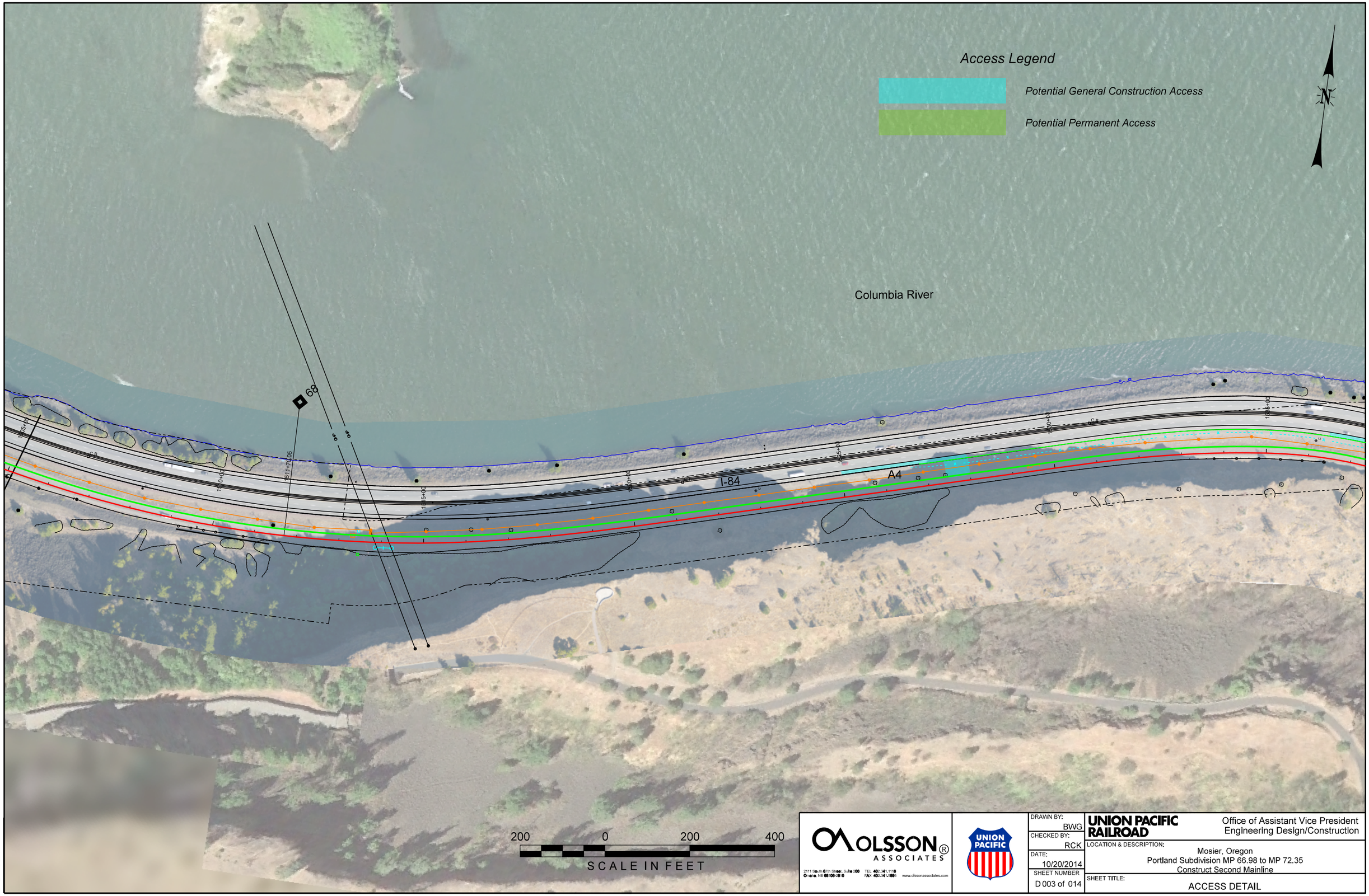
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-002.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-002.dgn



Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_full.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-003.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 003 of 014

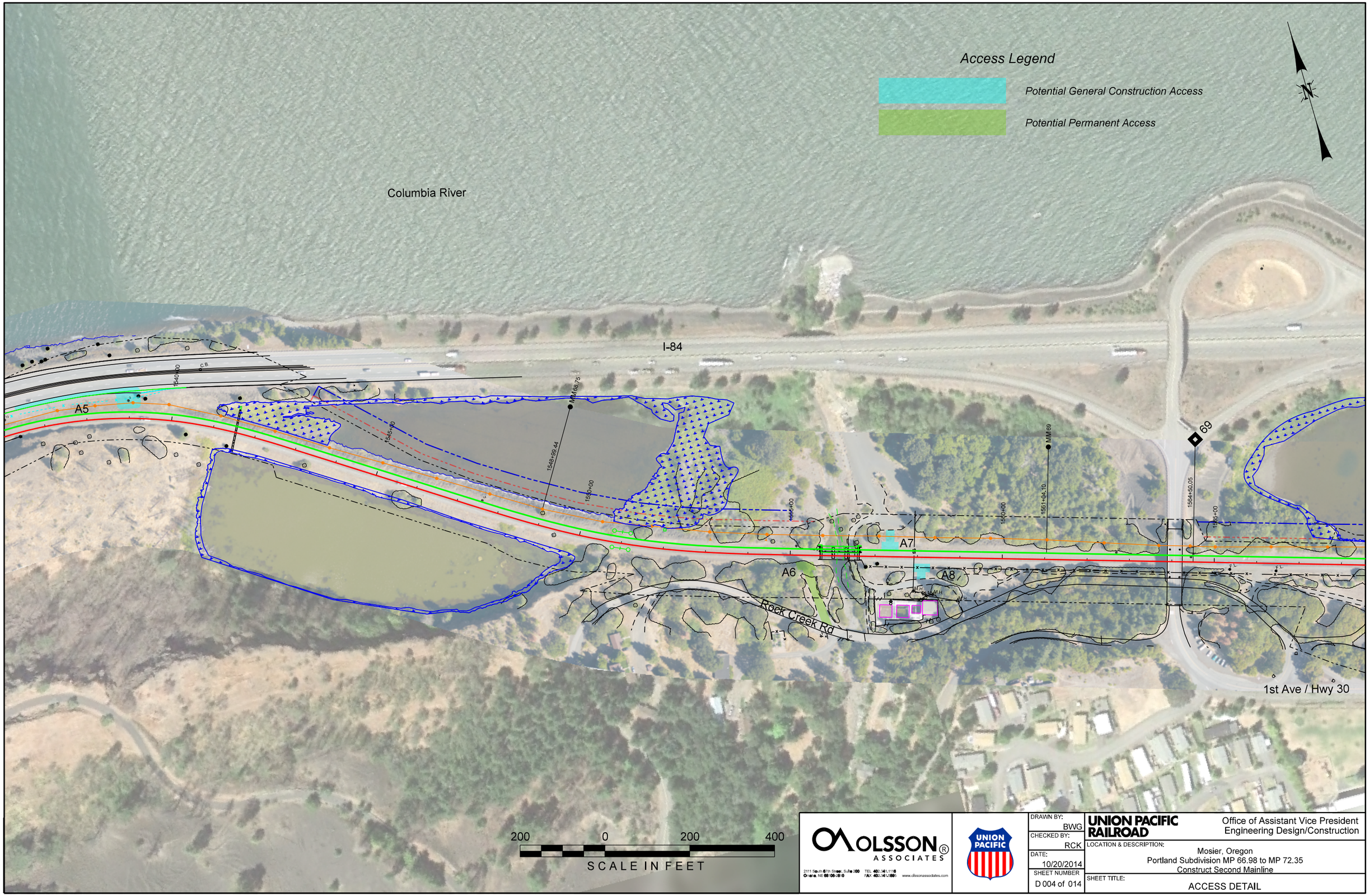
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-003.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 004 of 014

UNION PACIFIC RAILROAD

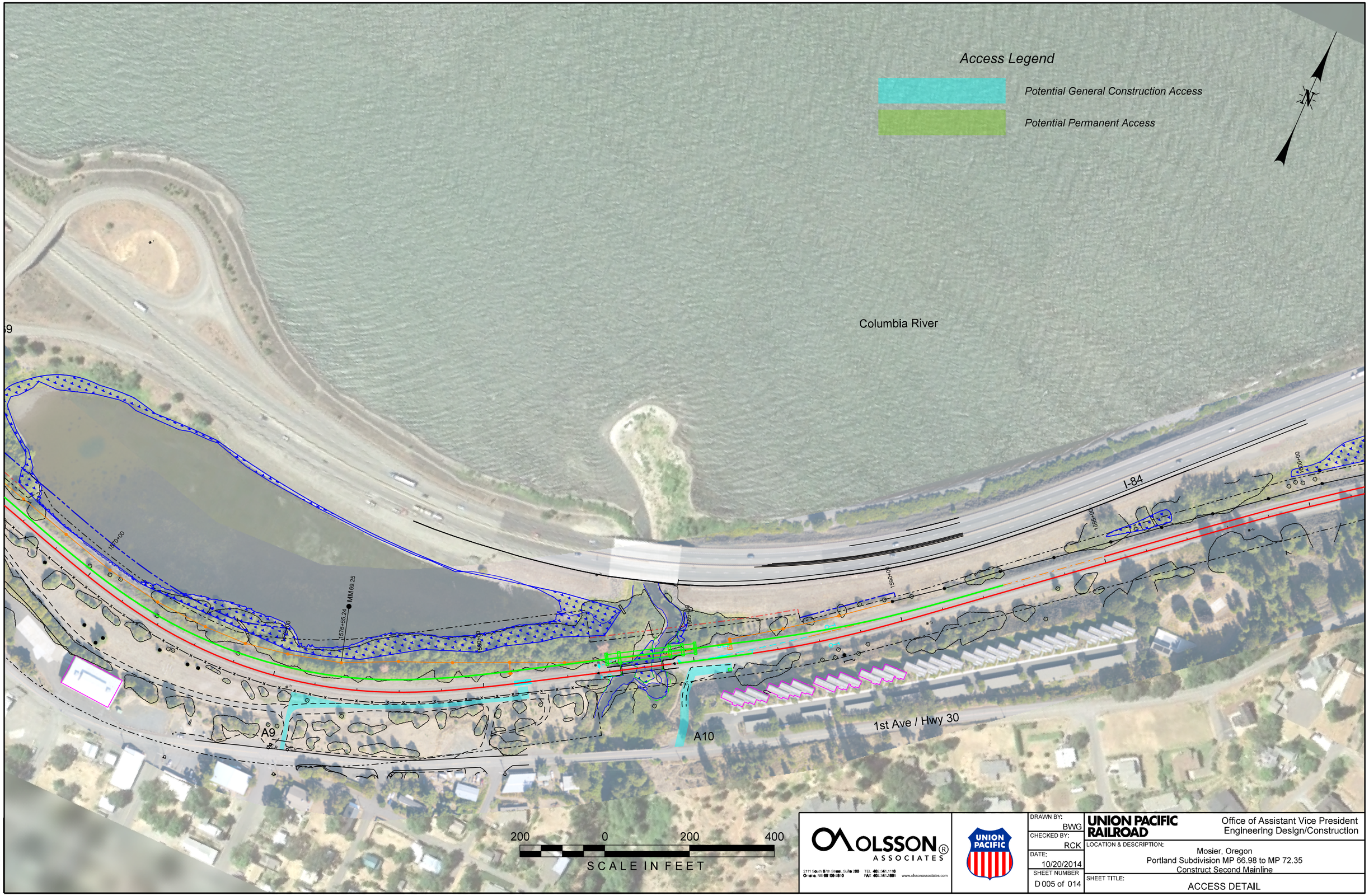
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5.color_full.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-004.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-004.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 005 of 014

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-005.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-005.dgn

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 006 of 014

UNION PACIFIC RAILROAD

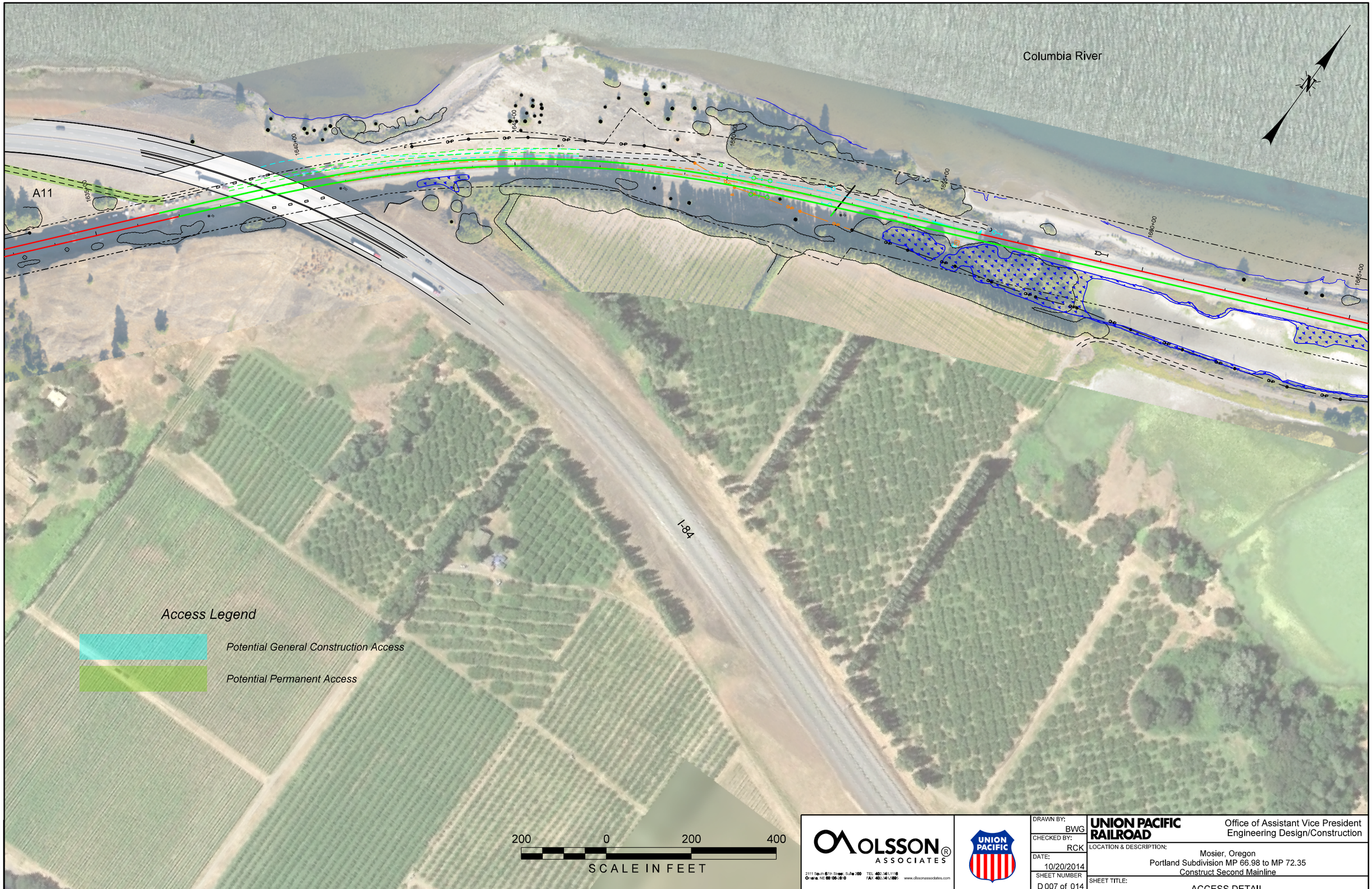
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-006.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-006.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 007 of 014

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

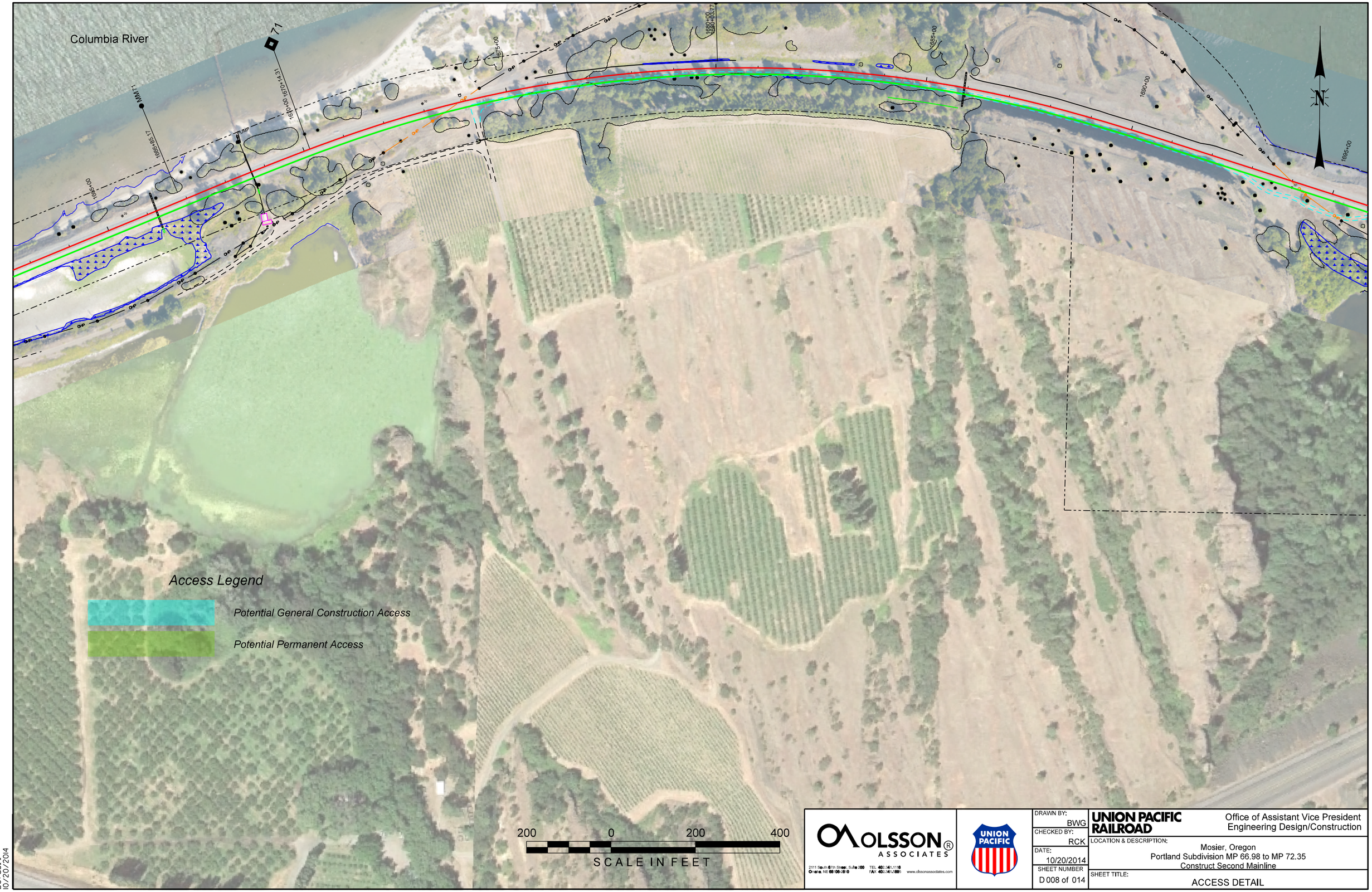
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-007.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-007.dgn

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_full.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-008.dgn
Default
10/20/2014



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 008 of 014

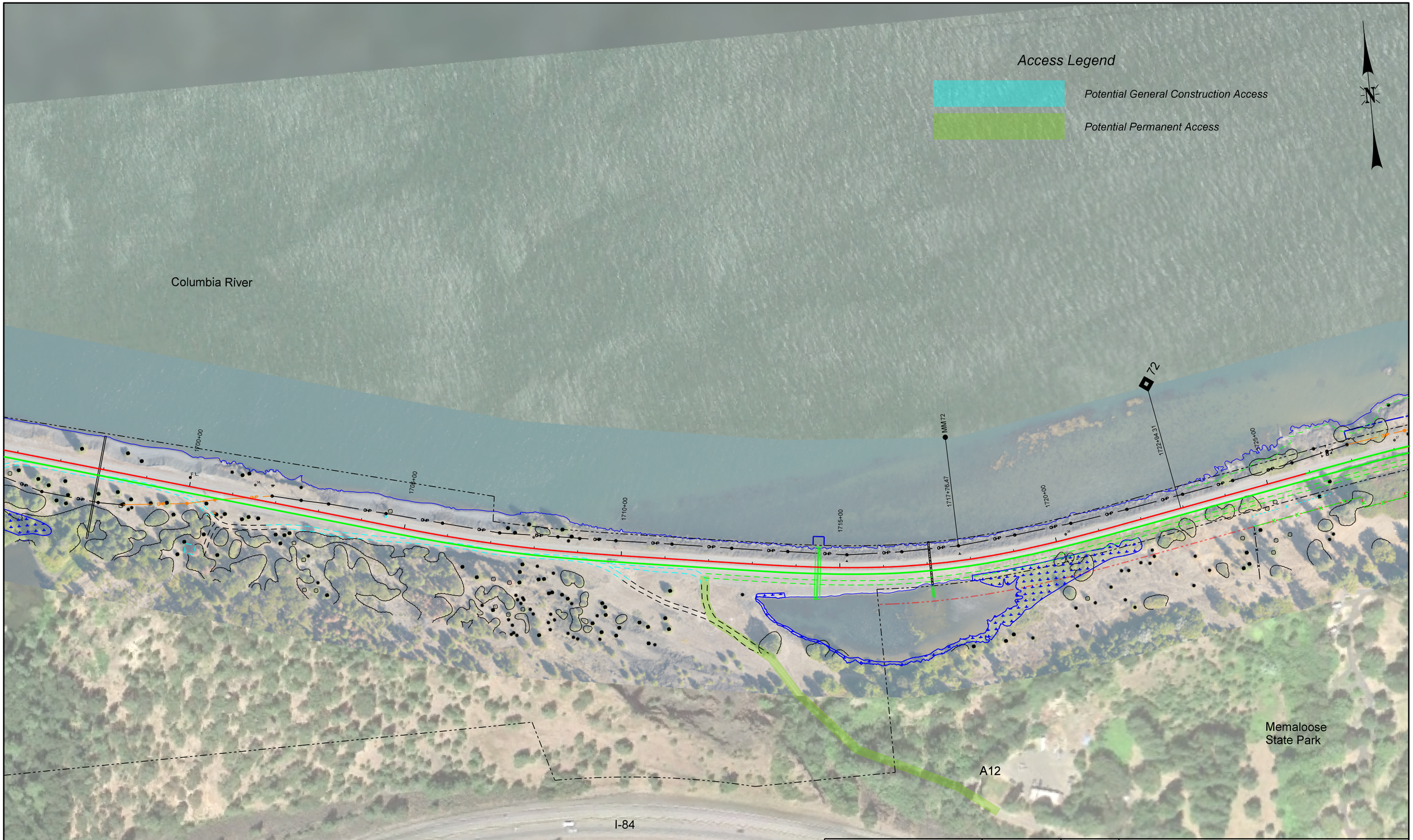
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-008.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 009 of 014

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-009.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-009.dgn

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 010 of 014

UNION PACIFIC RAILROAD

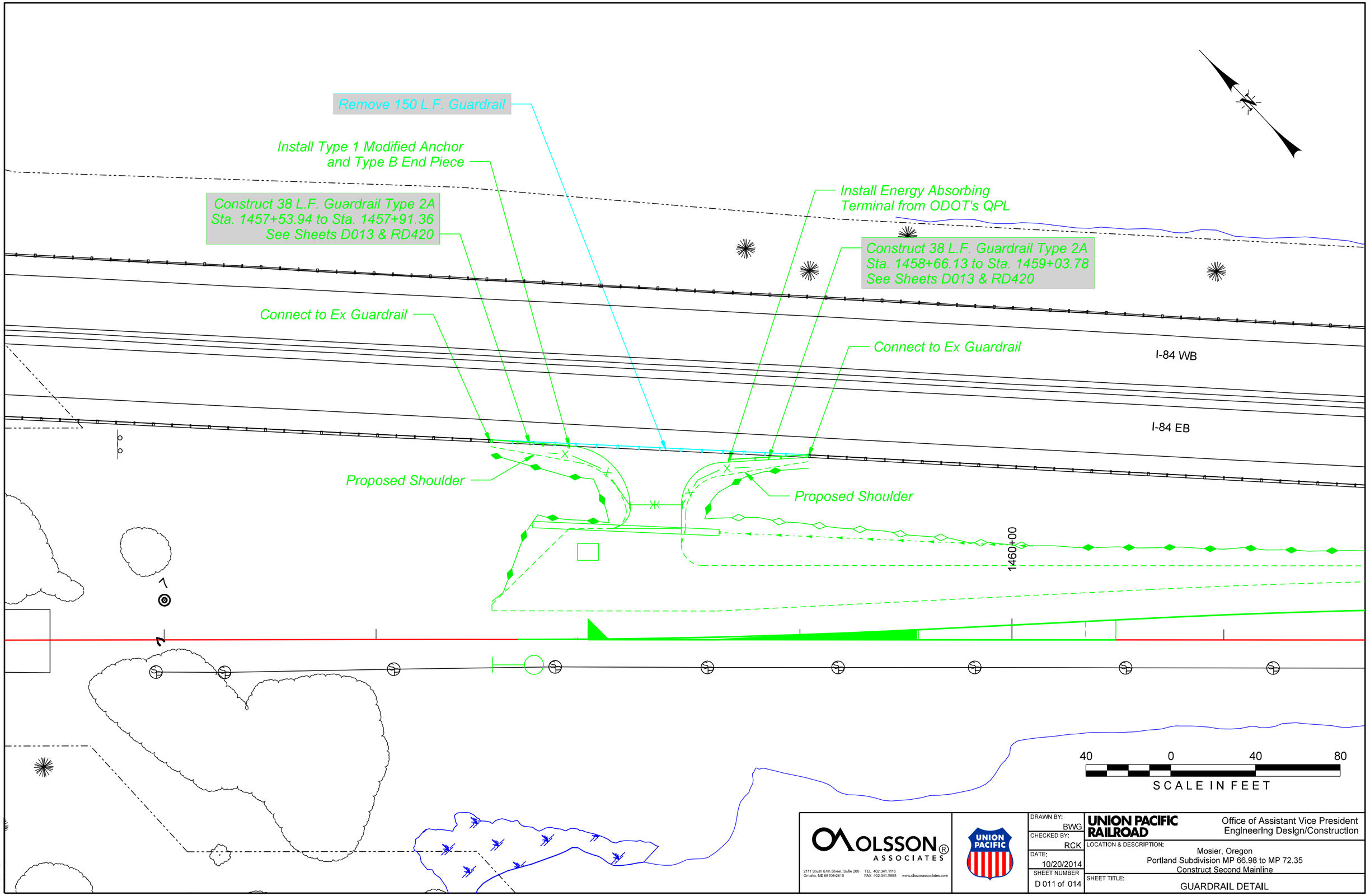
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
ACCESS DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\5_color_fill.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-010.dgn
Default
10/20/2014

F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Plan\Access_Detail_Mosier-010.dgn



OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 011 of 014

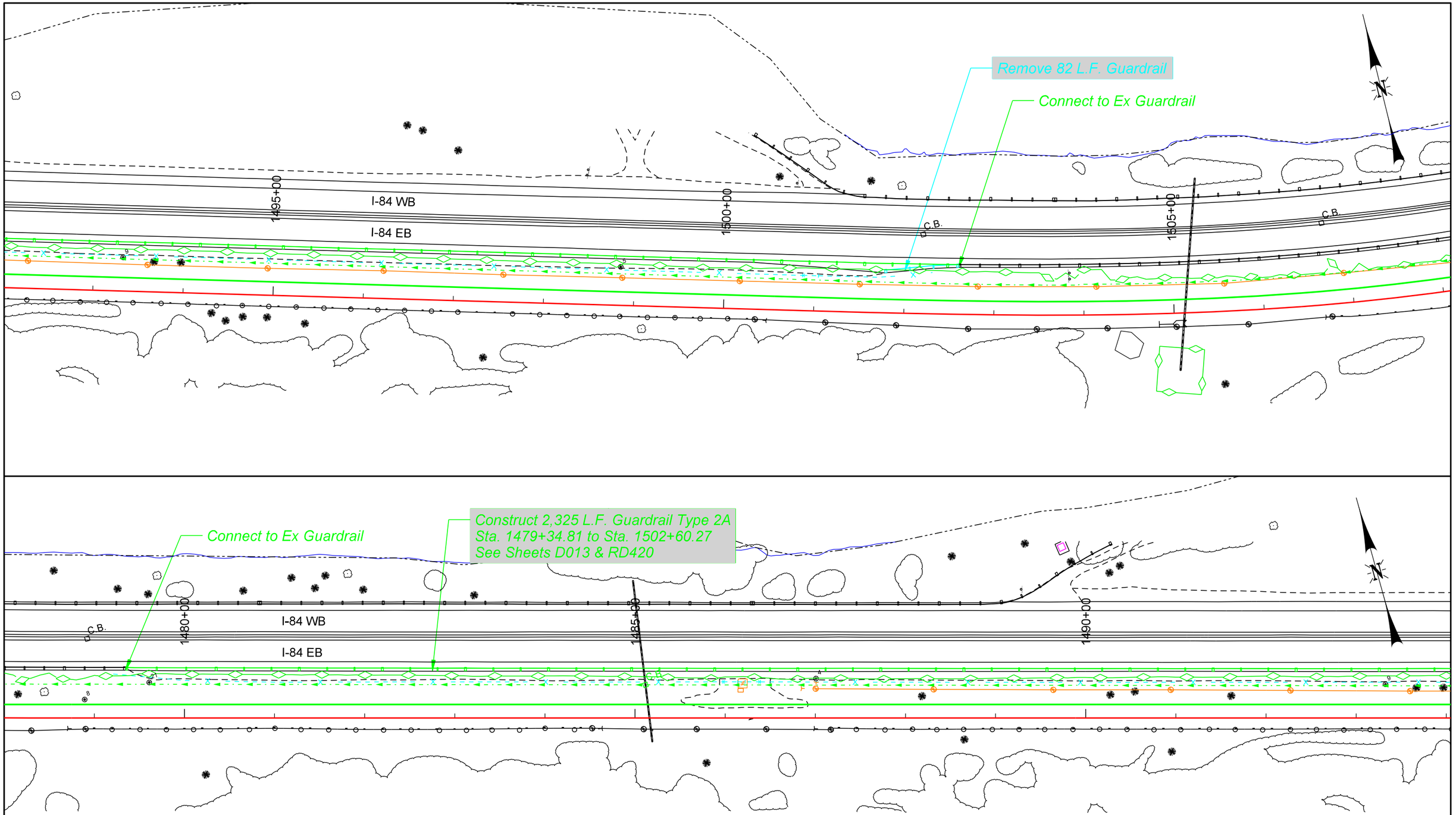
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
GUARDRAIL DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\04_Details\067070 GuardrailDetail01.dgn
Default
10/20/2014



100 0 100 200

SCALE IN FEET

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D012 of 014

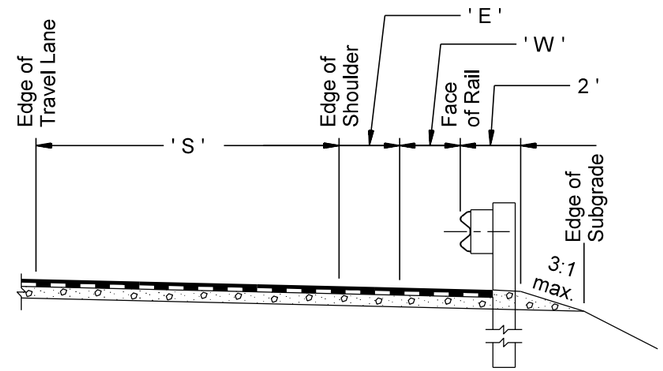
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

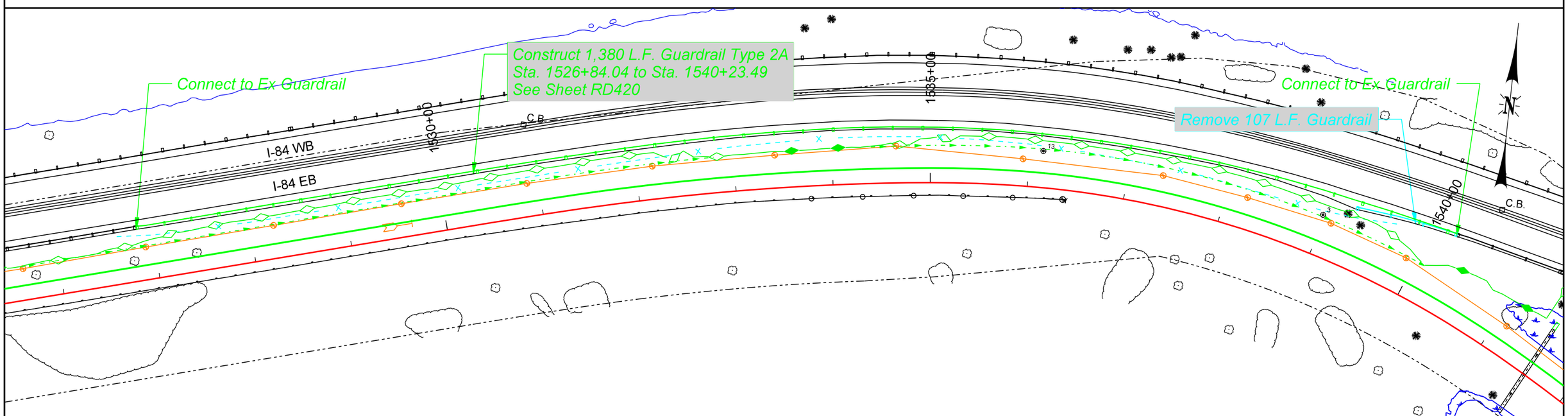
SHEET TITLE:
GUARDRAIL DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\04_Details\067070 GuardrailDetail02.dgn
Default
10/20/2014



Guardrail Typical Section

STA. TO STA.	'S'	'E'	'W'
1457+54.06 to 1457+91.36	9.84' to 10.0'	0.0'	0.0' to 1.0'
1458+66.13 to 1459+03.78	10.0' to 9.84'	0.0'	4.0' to 0.0'
1479+34.81 to 1479+44.80	9.84' to 10.0'	0.0'	0.0'
1479+44.80 to 1502+60.27	10.0'	0.0'	0.0'
1526+84.04 to 1526+94.02	9.84' to 10.0'	0.0'	0.0'
1526+94.02 to 1540+23.49	10.0'	0.0'	0.0'



100 0 100 200
SCALE IN FEET

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

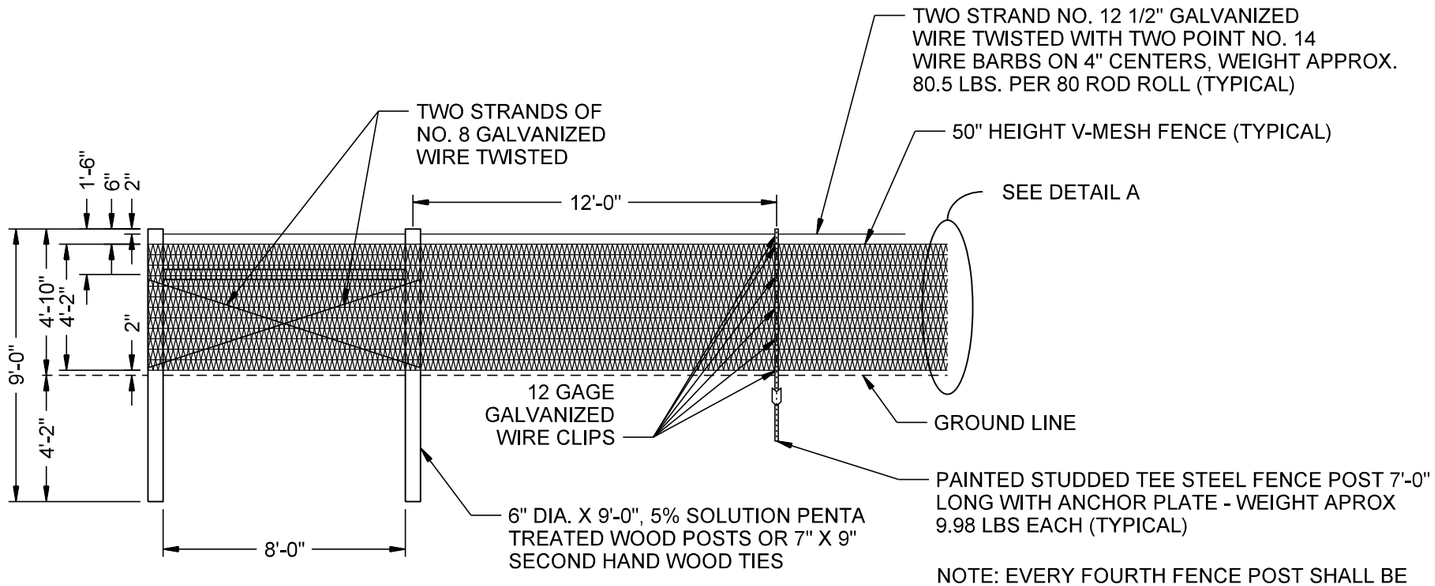
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D013 of 014

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

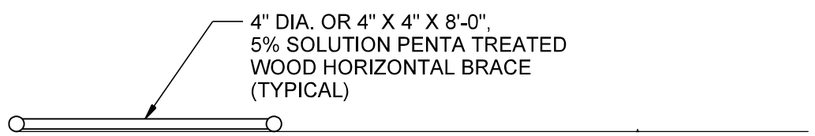
SHEET TITLE:
GUARDRAIL DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\04_Details\067070 GuardrailDetail03.dgn
Default
10/20/2014

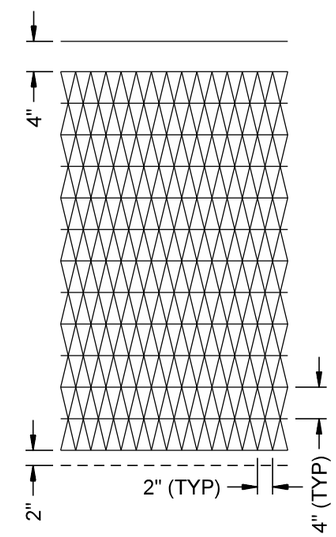


ELEVATION VIEW

NOTE: EVERY FOURTH FENCE POST SHALL BE A 6" DIA. X 9'-0", 5% SOLUTION PENTA TREATED WOOD POSTS OR 7" X 9" SECOND HAND WOOD TIES.



PLAN VIEW



DETAIL A

V-MESH FENCE

NOTE: REFER TO UPRR STANDARD DRAWING 0075 FOR GENERAL ARRANGEMENT INFORMATION AND ADDITIONAL NOTES.

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

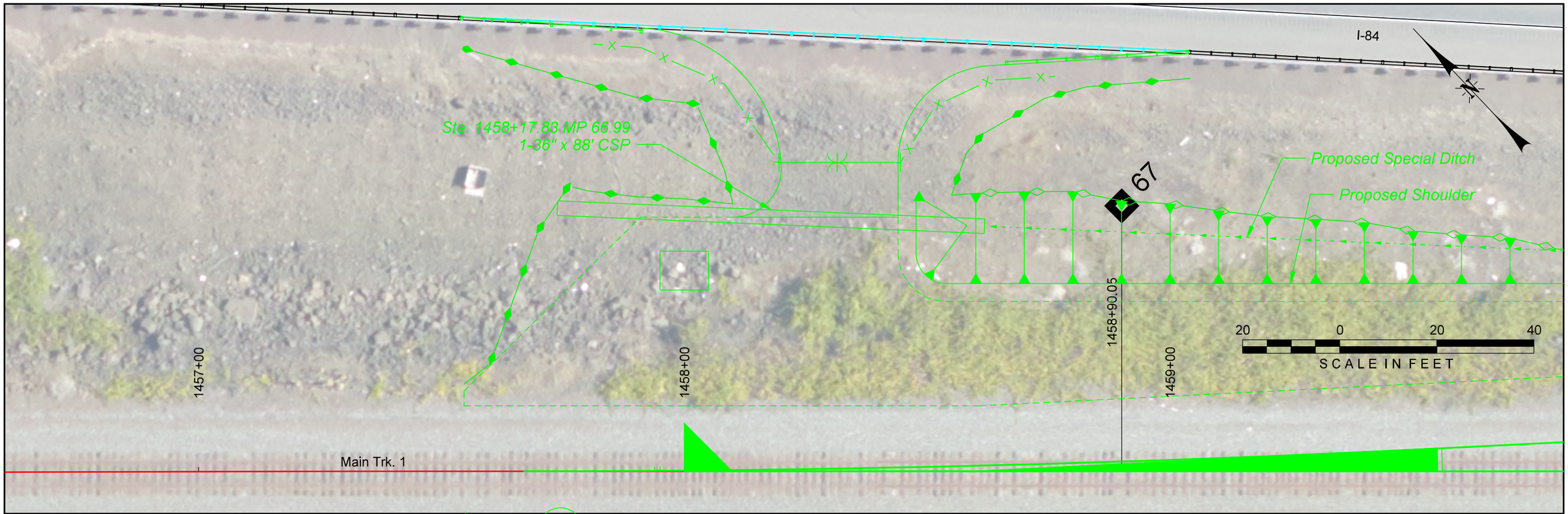
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	D 014 of 014

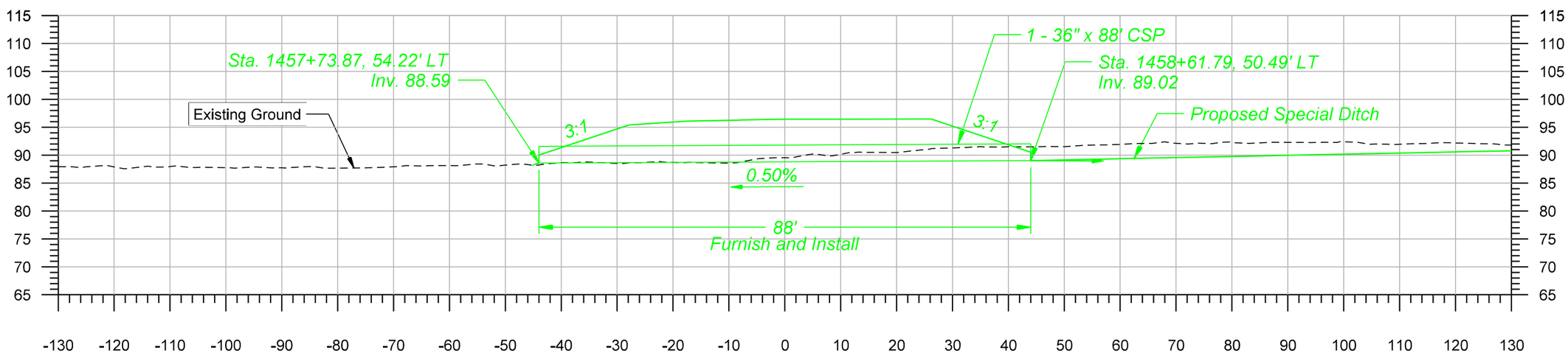
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
La Grande, Oregon - Milam to Gibbon
La Grande Subdivision MP 233.42 To MP 237.49
Construct Second Mainline Track

SHEET TITLE:
FENCE DETAIL

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\04_Details\V-Mesh Fence Detail.dgn
Default
10/20/2014





36" CSP - Sta. 1458+17.83 - MP 66.99

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C001 of 007

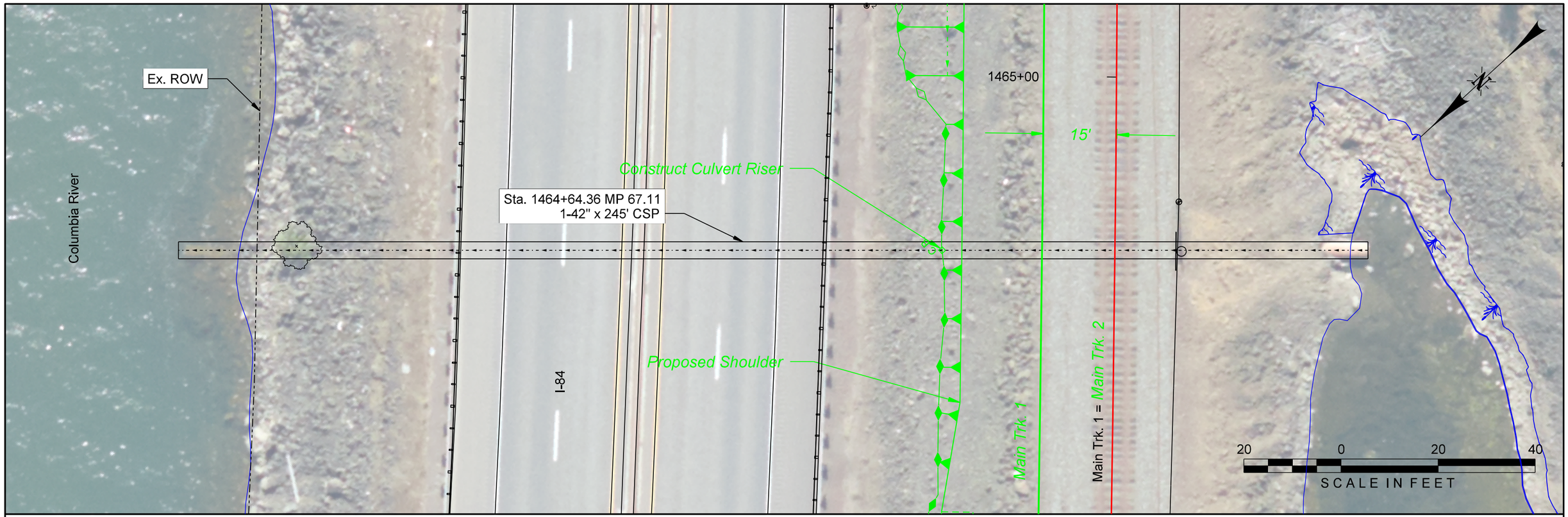
UNION PACIFIC RAILROAD

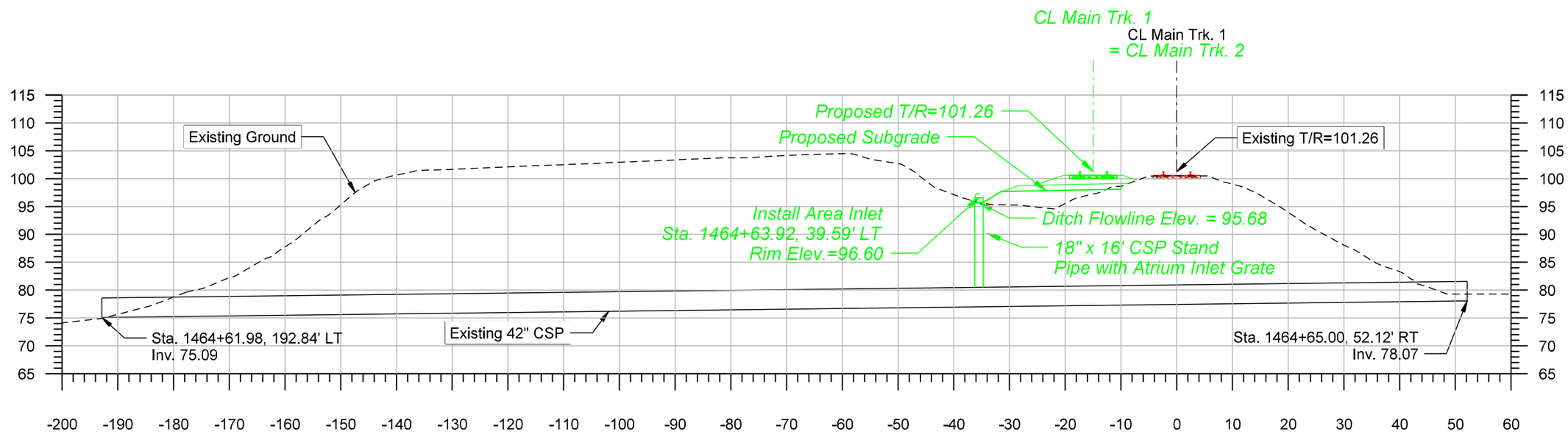
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1458+17.83 - 36" CSP

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20.Mosier West\Design\DGN\Sheets\05.Culvert Details\C001-66.99.dgn
Default
10/20/2014





42" CMP - Sta. 1464+64 - MP 67.11

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C002 of 007

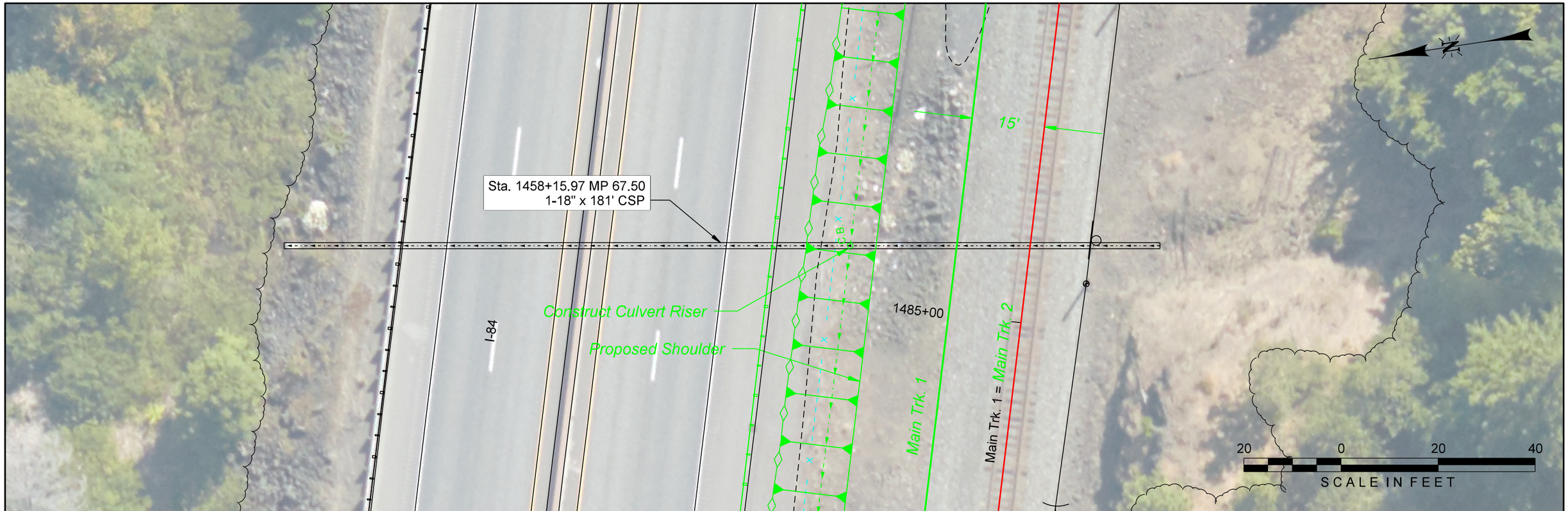
UNION PACIFIC RAILROAD

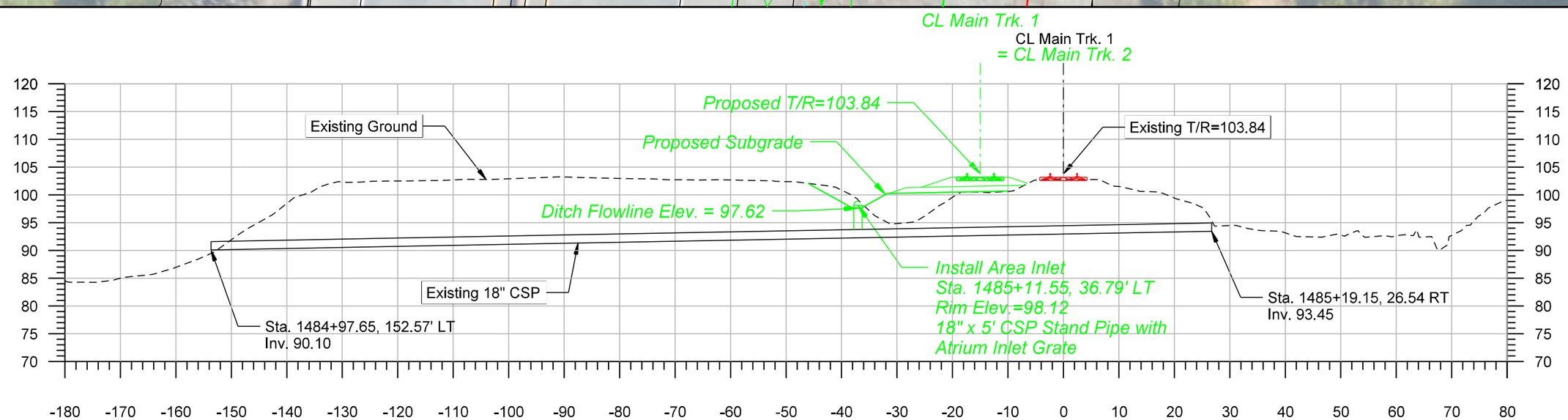
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1464+64 - CONSTRUCT CULVERT RISER

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\05_Culvert Details\C002-67_II.dgn
Default
10/20/2014





18" CSP - Sta. 1485+19 - MP 67.50

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C003 of 007

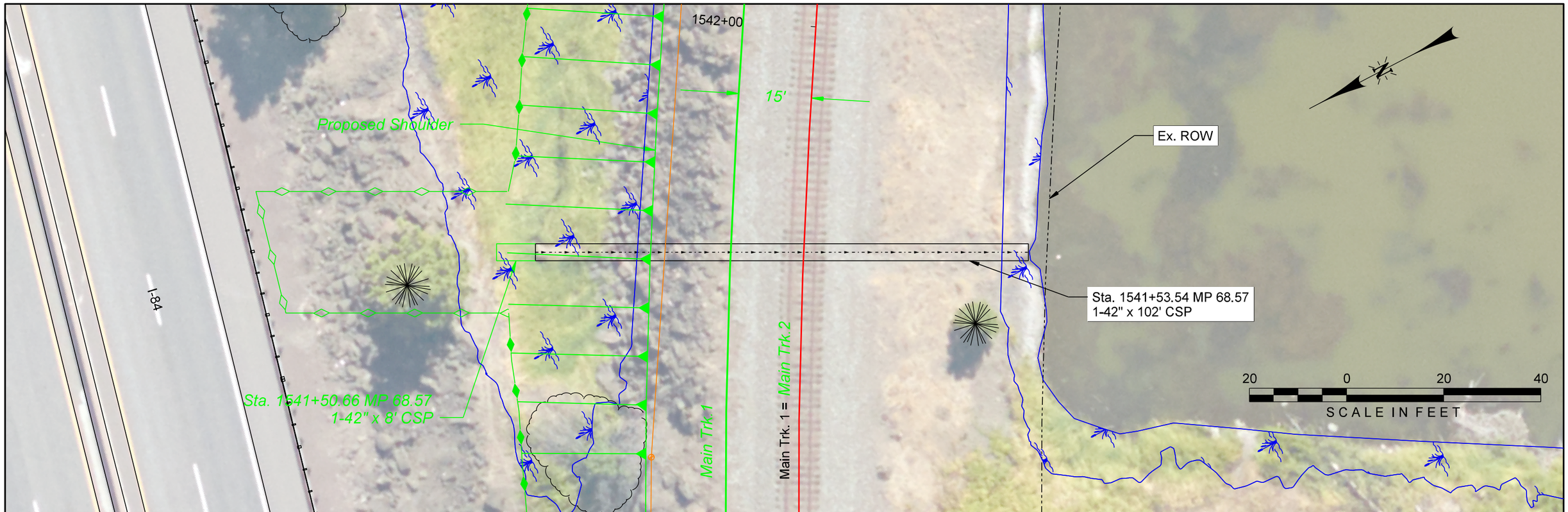
UNION PACIFIC RAILROAD

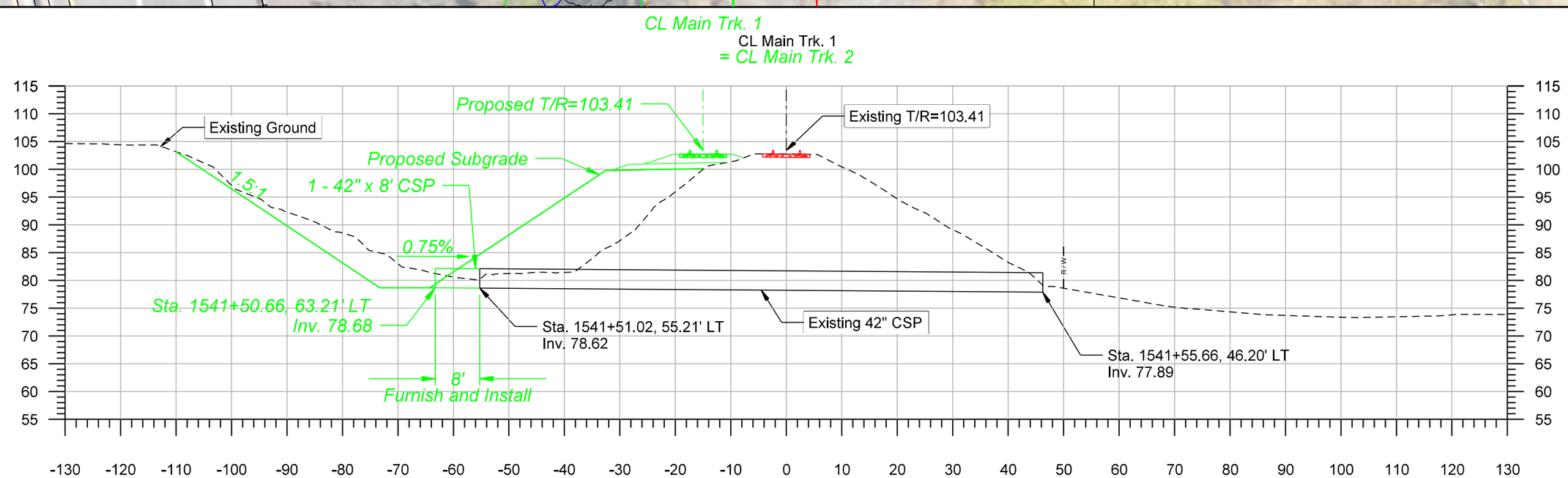
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1485+19 - CONSTRUCT CULVERT RISER

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\05_Culvert Details\C003-67.50.dgn
Default
10/20/2014





42" CSP - Sta. 1541+53.54 - MP 68.57

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C004 of 007

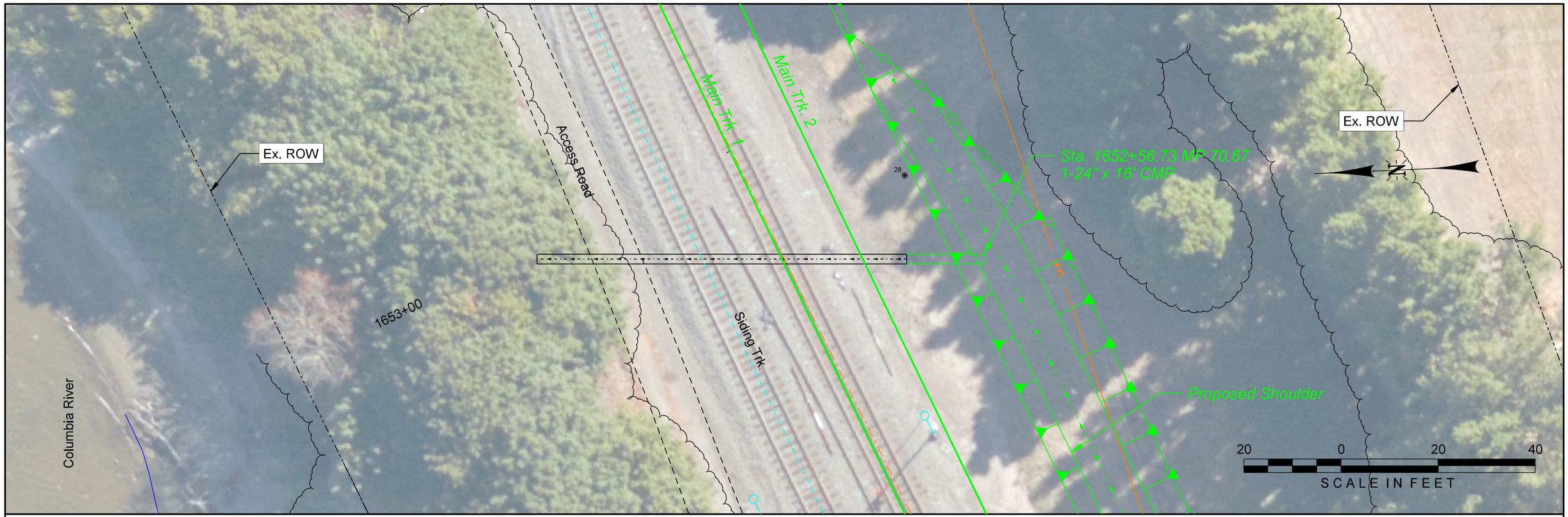
UNION PACIFIC RAILROAD

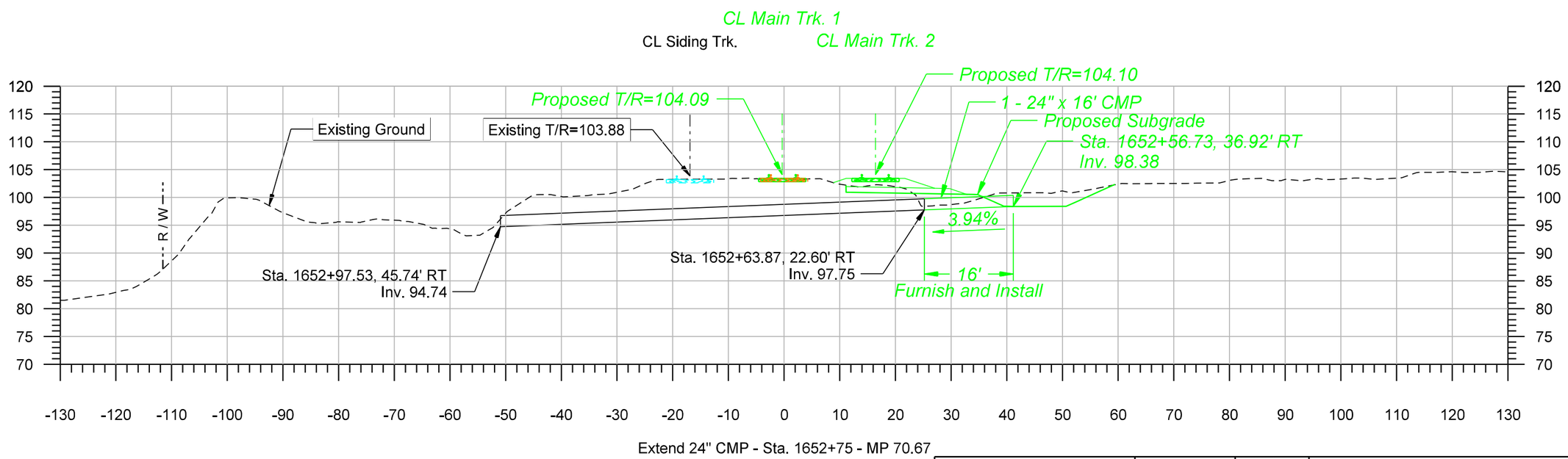
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1541+54 - EXTEND 42" CSP

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\05_Culvert Details\C004-68.57.dgn
Default
10/20/2014





Extend 24" CMP - Sta. 1652+75 - MP 70.67

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C005 of 007

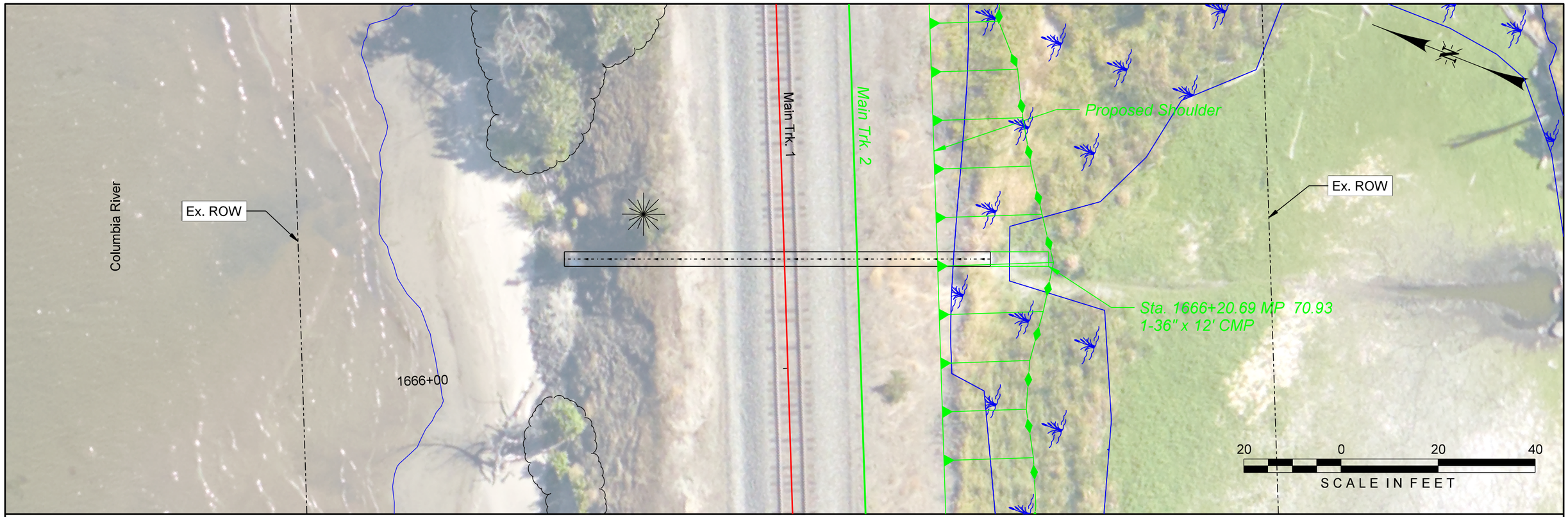
UNION PACIFIC RAILROAD

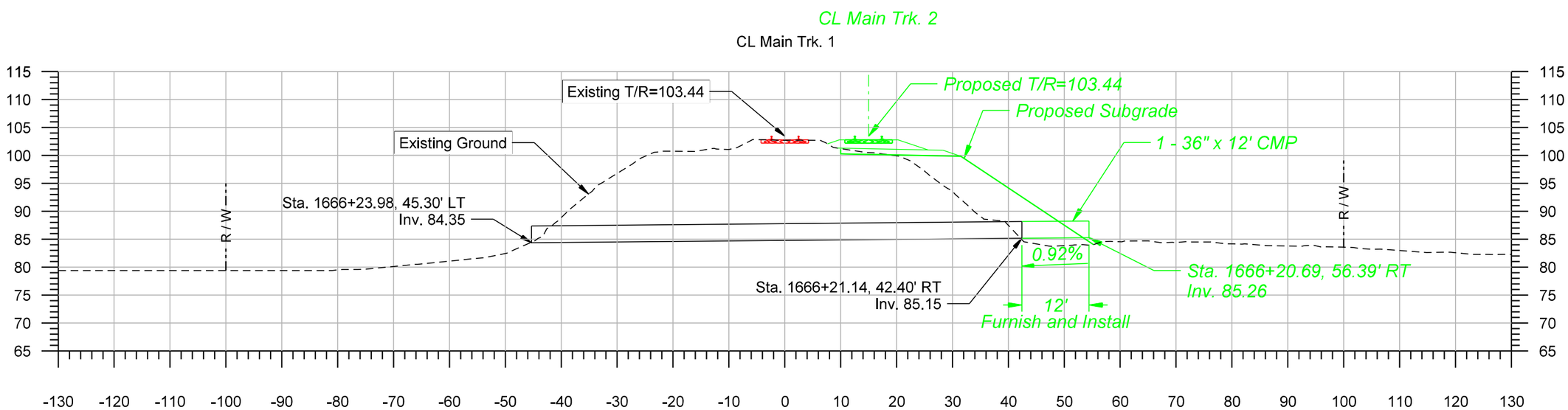
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1652+75.11 - EXTEND EXISTING 24" CMP

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\05_Culvert Details\C005-70_67.dgn
Default
10/20/2014





Extend 36" CMP - Sta. 1666+23 - MP 70.93

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C006 of 007

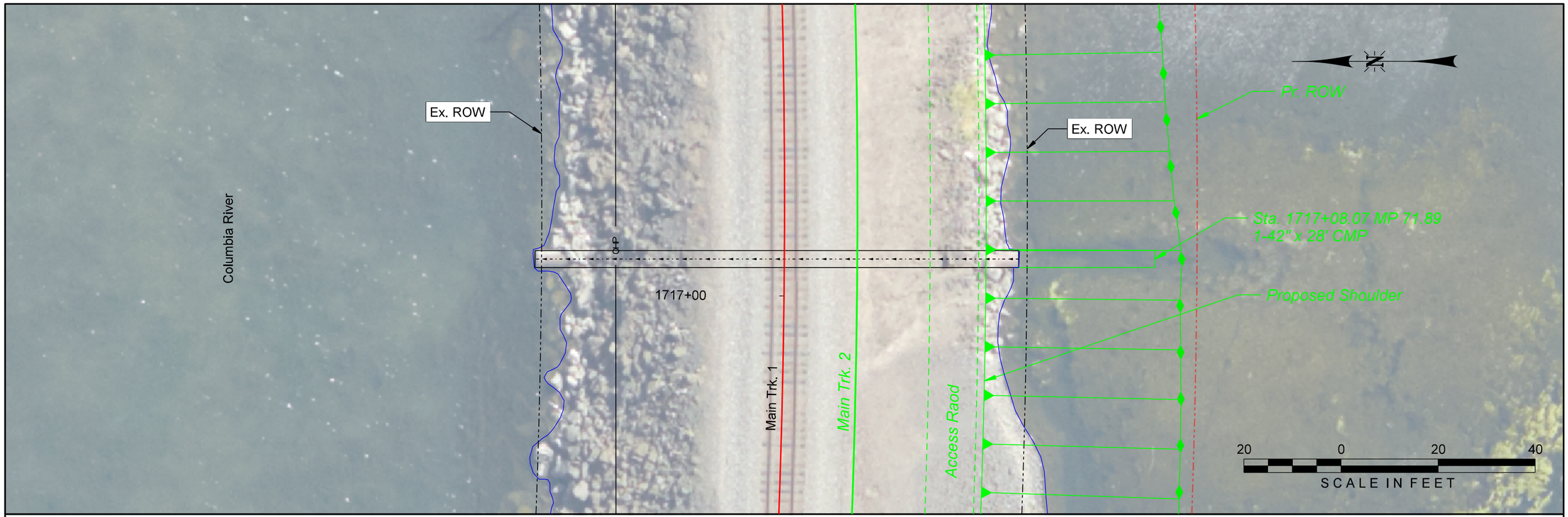
UNION PACIFIC RAILROAD

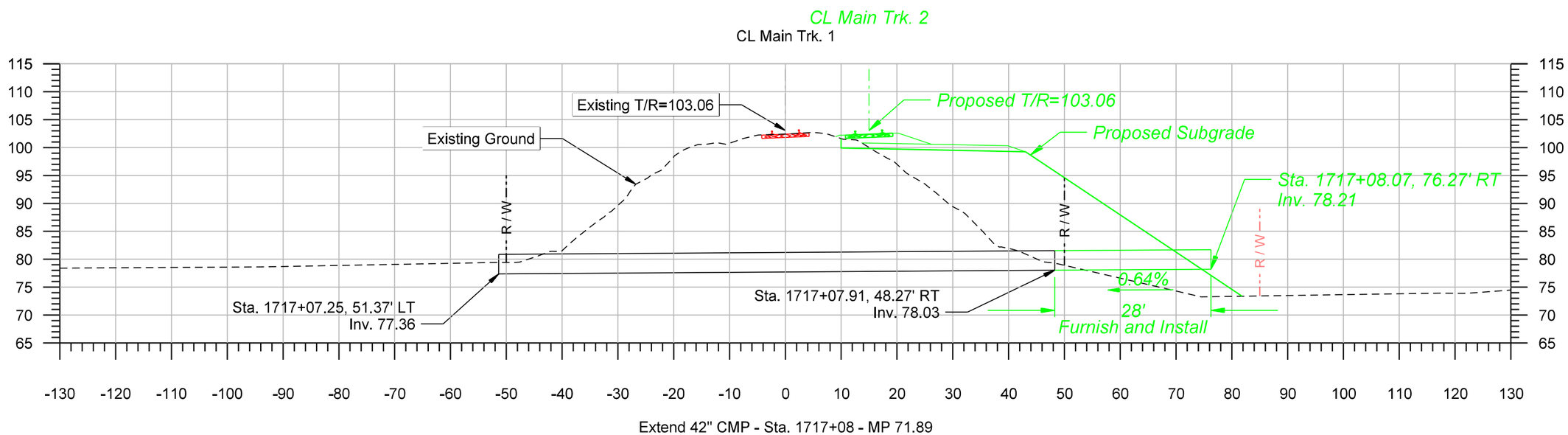
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1666+22.51 - EXTEND EXISTING 36" CMP

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\05_Culvert Details\C006-70.93.dgn
Default
10/20/2014





Extend 42" CMP - Sta. 1717+08 - MP 71.89

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	C007 of 007

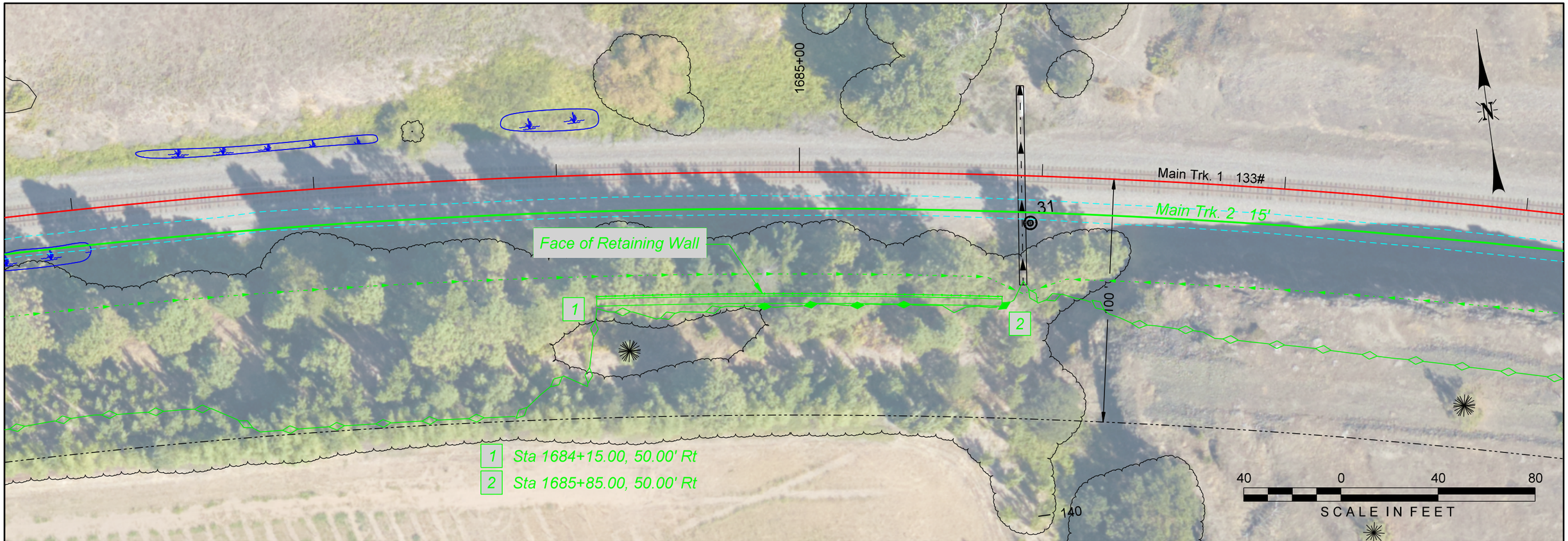
UNION PACIFIC RAILROAD

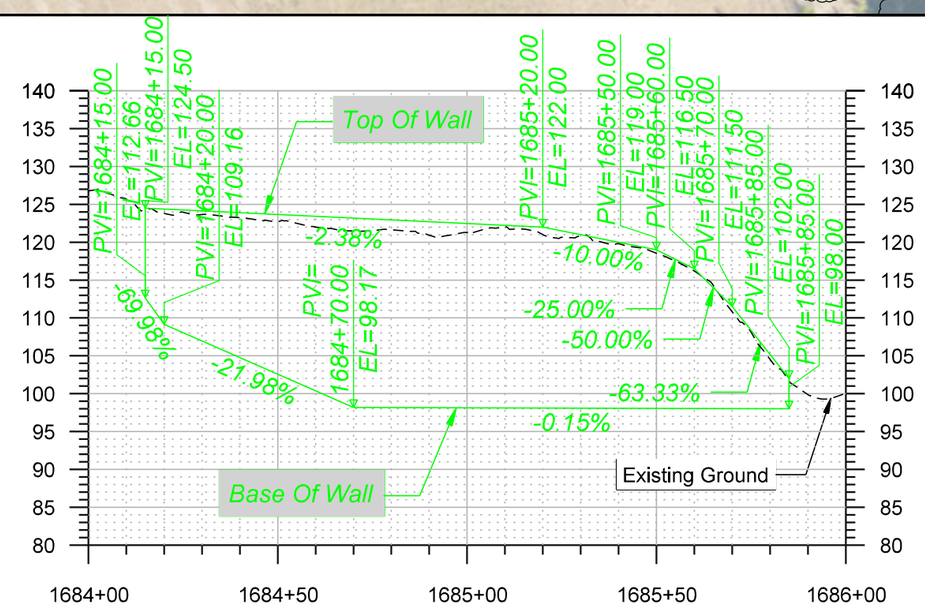
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CULVERT STA. 1717+08 - EXTEND 42" CMP

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\05_Culvert Details\C007-71.89.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	W001 of 001

UNION PACIFIC RAILROAD

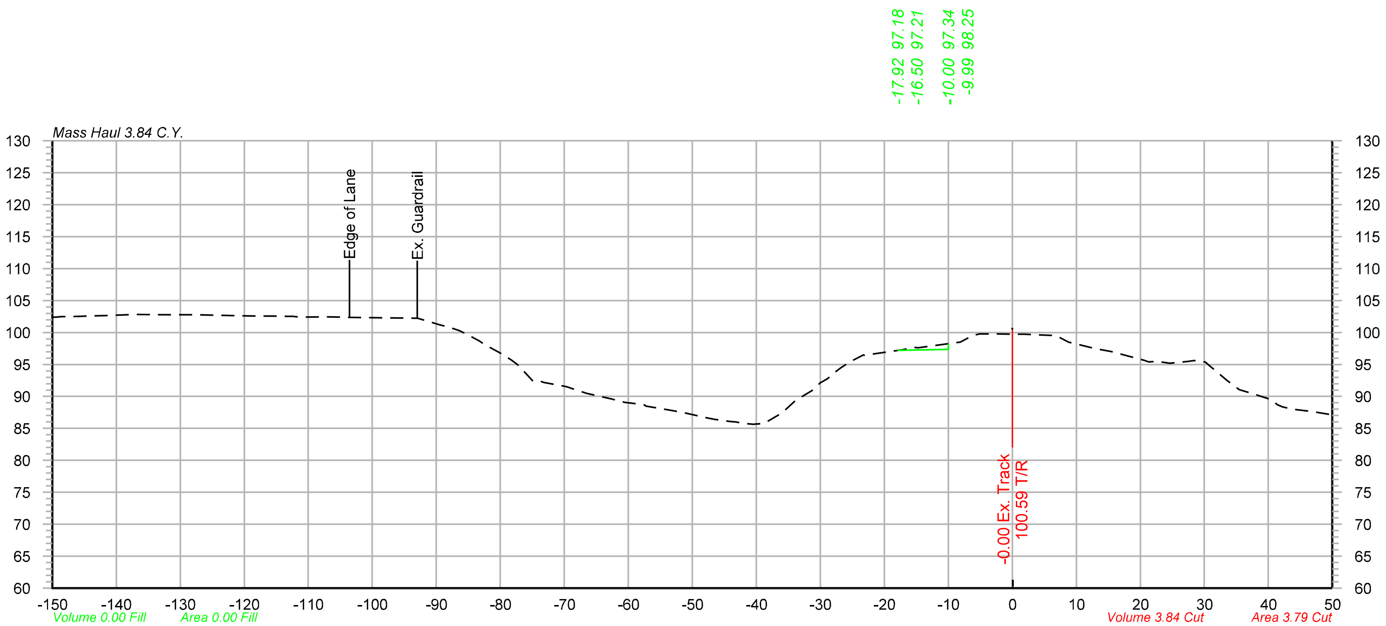
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
RETAINING WALL STA. 1684+15 TO STA. 1685+85

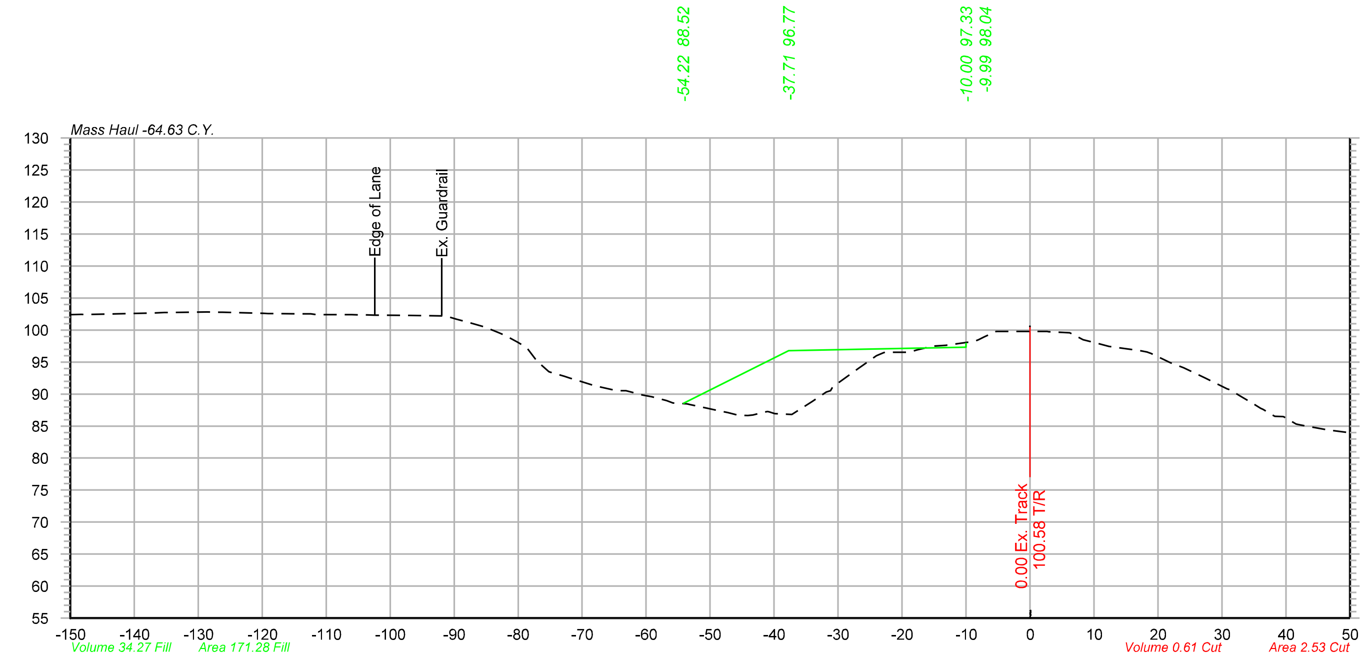
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\PDF\Pen Tables\UPRR_V8i_Pentable_Mosier.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\06_Retaining WallDetails\070073 W_001.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



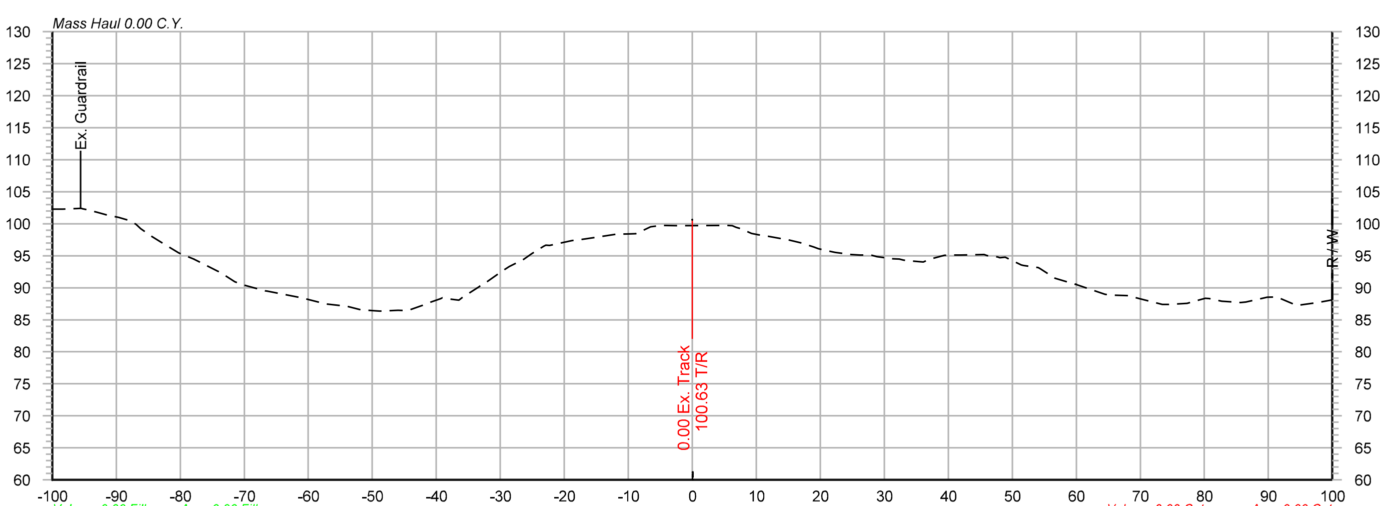
1457+55

102.38	-150.00
102.53	-145.65
102.65	-141.53
102.78	-138.23
102.77	-132.62
102.76	-128.76
102.61	-120.27
102.57	-115.96
102.51	-112.41
102.45	-107.76
102.38	-104.68
102.25	-93.16
101.18	-89.42
100.26	-86.33
98.68	-83.31
96.83	-80.05
92.50	-75.00
91.56	-69.82
90.50	-66.50
89.59	-62.63
88.84	-58.75
87.89	-53.77
86.63	-47.72
86.08	-43.97
85.62	-40.48
87.43	-35.96
91.03	-31.12
93.96	-27.46
96.48	-23.30
97.31	-17.03
98.49	-8.24
99.78	-5.12
99.73	0.10
99.64	3.44
99.51	6.82
98.19	10.08
97.00	15.45
95.65	20.62
95.19	24.61
95.60	28.36
92.51	33.53
90.47	37.41
89.50	40.48
87.97	43.94
87.58	47.04



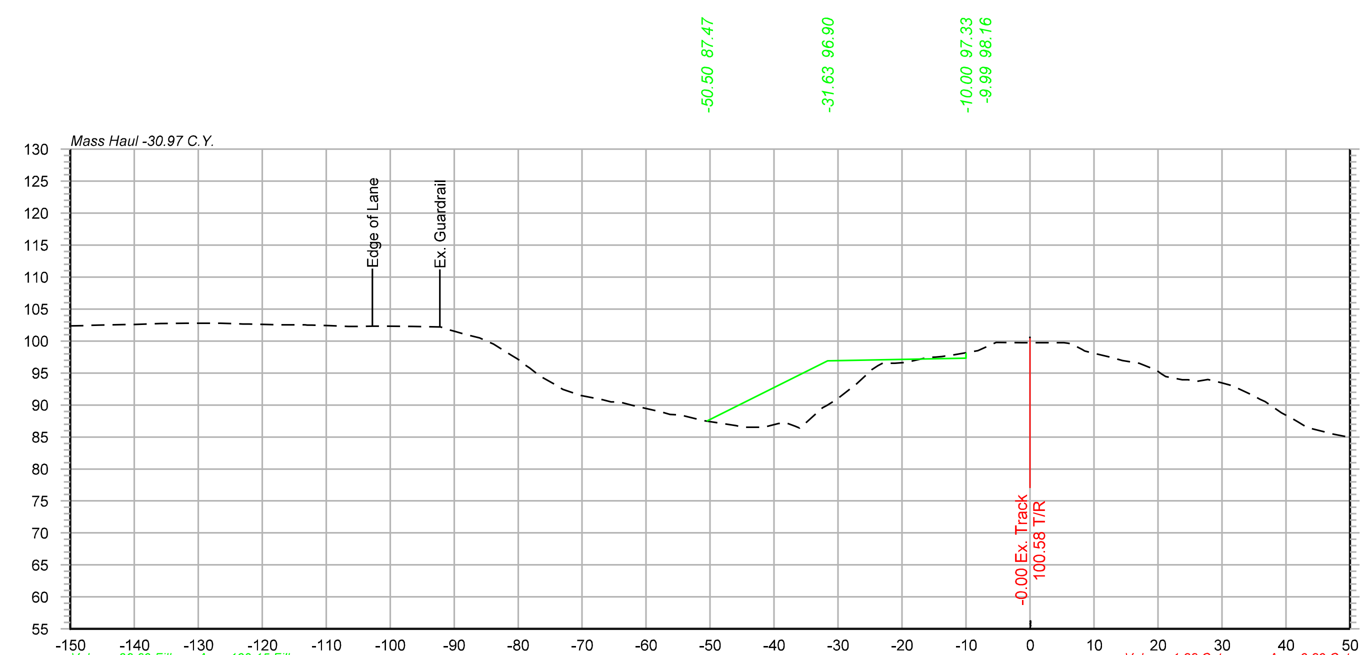
1457+76

102.41	-150.00
102.44	-146.53
102.53	-142.76
102.67	-137.20
102.81	-128.64
102.60	-119.86
102.51	-114.50
102.42	-108.20
102.37	-104.85
102.32	-101.22
102.28	-96.87
102.24	-93.80
101.69	-89.66
100.48	-85.29
99.11	-81.94
97.24	-78.63
93.50	-75.19
92.50	-71.89
91.33	-68.09
90.59	-64.74
89.87	-60.59
88.98	-56.80
88.49	-53.72
87.79	-50.41
87.11	-47.23
86.65	-44.11
87.27	-41.06
86.81	-37.26
88.87	-34.01
91.13	-30.83
94.10	-26.69
96.45	-22.91
96.54	-18.96
97.50	-15.17
98.22	-8.68
99.76	-5.30
99.76	-2.01
99.76	2.71
99.56	6.19
97.94	10.46
96.76	17.22
95.50	20.71
94.13	24.00
92.54	27.35
90.81	30.81
88.53	34.86
86.52	38.27
85.31	41.59
84.43	46.29
84.02	49.48



1457+00

102.29	-100.00
102.40	-95.51
101.37	-91.43
100.47	-87.91
97.98	-84.39
95.44	-80.23
94.09	-77.08
92.43	-73.82
90.49	-70.29
89.53	-66.75
88.52	-61.51
87.77	-58.42
87.11	-53.94
86.44	-50.08
86.49	-45.98
87.25	-42.10
88.44	-39.00
88.49	-35.93
90.64	-32.68
93.31	-28.61
95.33	-25.10
97.34	-18.84
97.87	-15.17
98.37	-11.94
98.44	-8.82
99.72	-4.80
99.73	5.45
98.49	9.25
97.45	15.18
96.36	19.02
95.54	22.29
95.09	26.19
94.52	31.36
94.02	36.09
95.06	39.37
95.17	45.62
94.75	48.89
93.17	54.06
90.53	59.87
88.97	64.46
88.79	68.11
87.40	73.42
87.57	77.32
88.30	80.78
87.75	85.30
88.51	89.83
87.26	94.38
87.71	97.70



1457+70

102.38	-150.00
102.50	-145.50
102.58	-141.49
102.74	-135.83
102.79	-131.82
102.79	-127.65
102.69	-123.82
102.53	-117.17
102.51	-113.34
102.39	-109.50
102.26	-105.76
102.33	-101.38
102.29	-96.43
102.21	-92.11
101.07	-88.40
99.89	-84.71
97.79	-81.07
94.54	-76.61
92.43	-73.01
90.82	-66.77
89.92	-62.16
88.89	-57.57
88.43	-54.55
87.56	-51.11
87.05	-47.83
86.50	-43.62
87.11	-39.29
86.49	-36.24
89.55	-32.41
93.29	-27.13
96.14	-23.76
96.63	-19.40
97.35	-16.28
97.64	-13.25
98.47	-8.16
99.75	-1.23
99.75	5.30
98.46	8.56
97.49	12.50
96.51	17.06
94.86	20.54
93.96	23.80
93.99	27.81
93.11	31.25
91.45	34.98
88.77	39.30
86.46	43.40
85.58	46.97
84.94	50.00

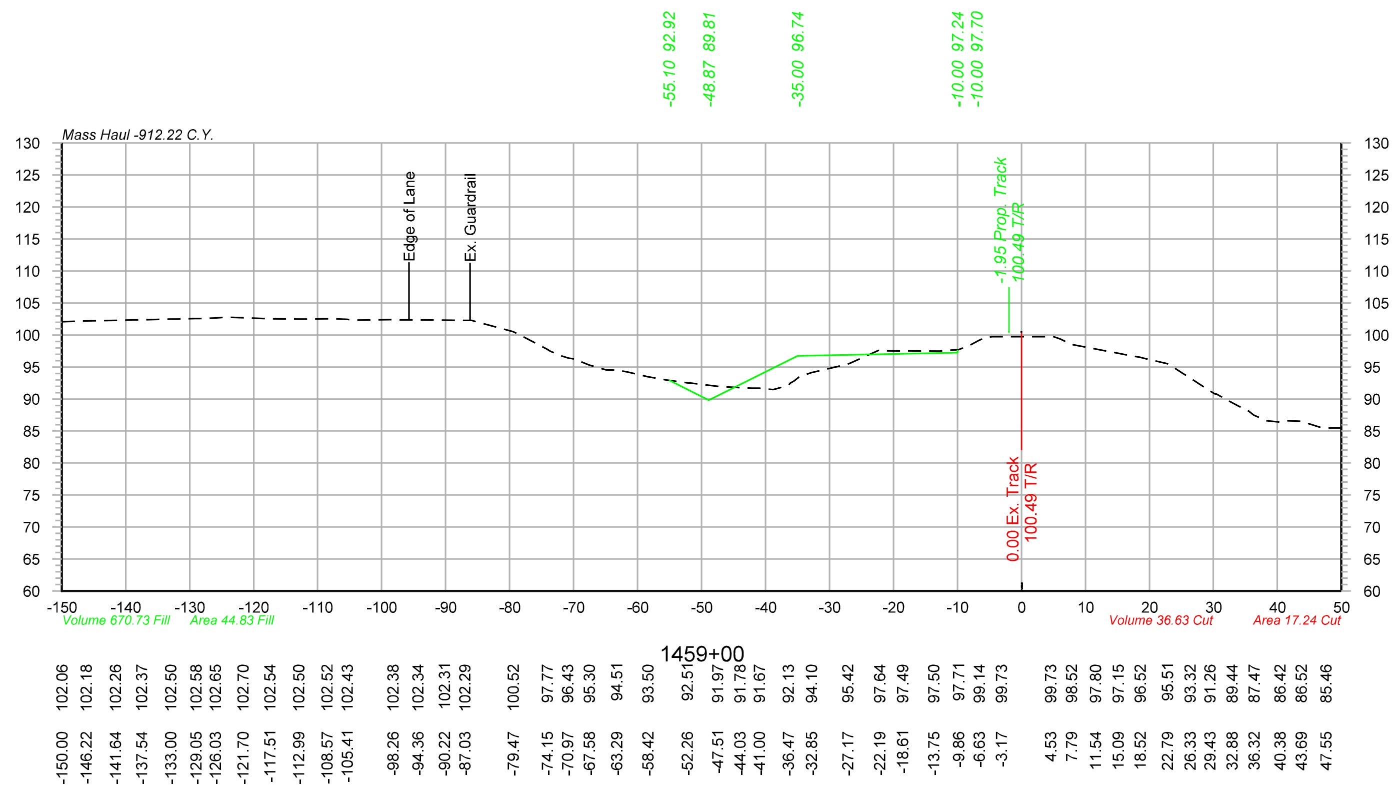
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

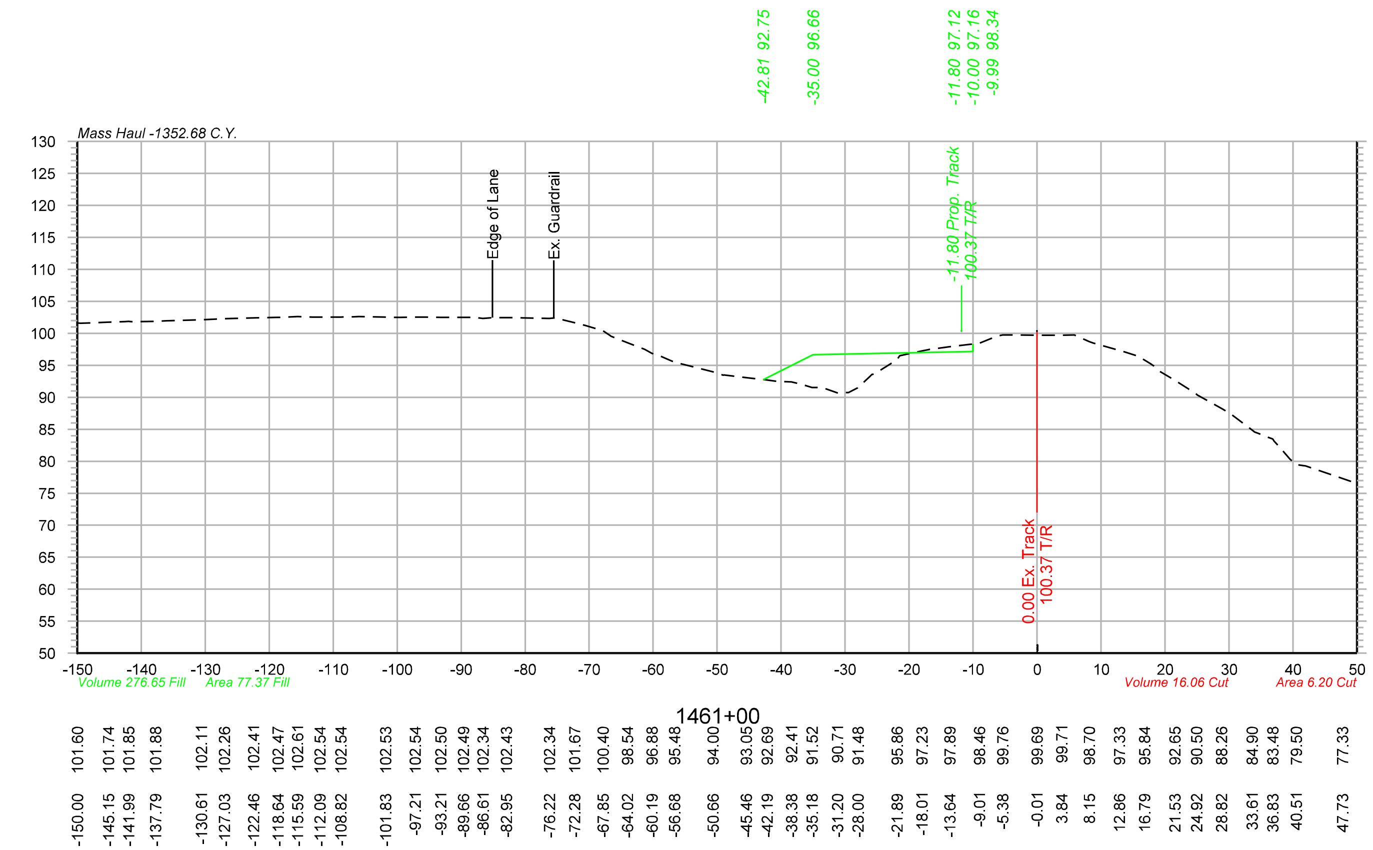
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 001 of 139

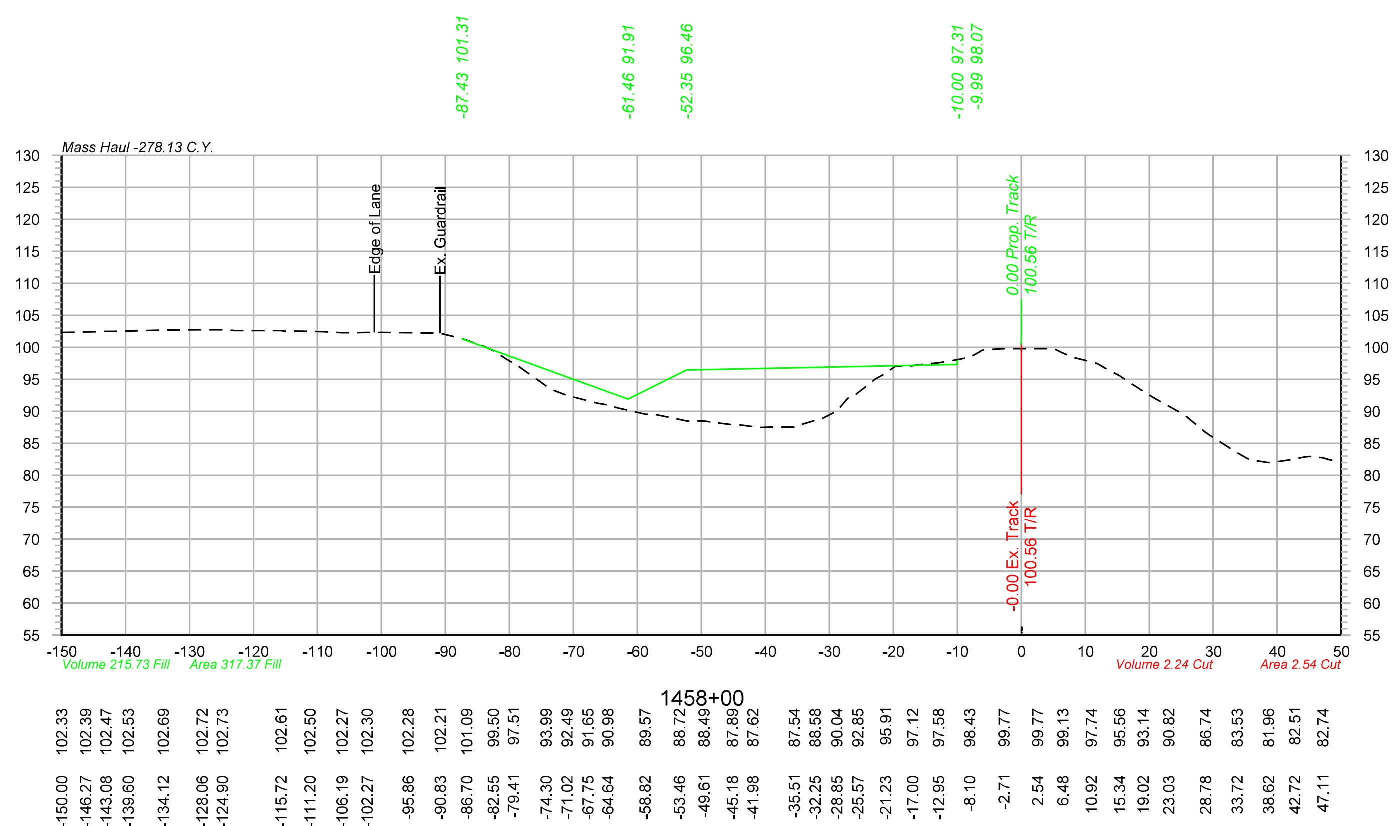
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

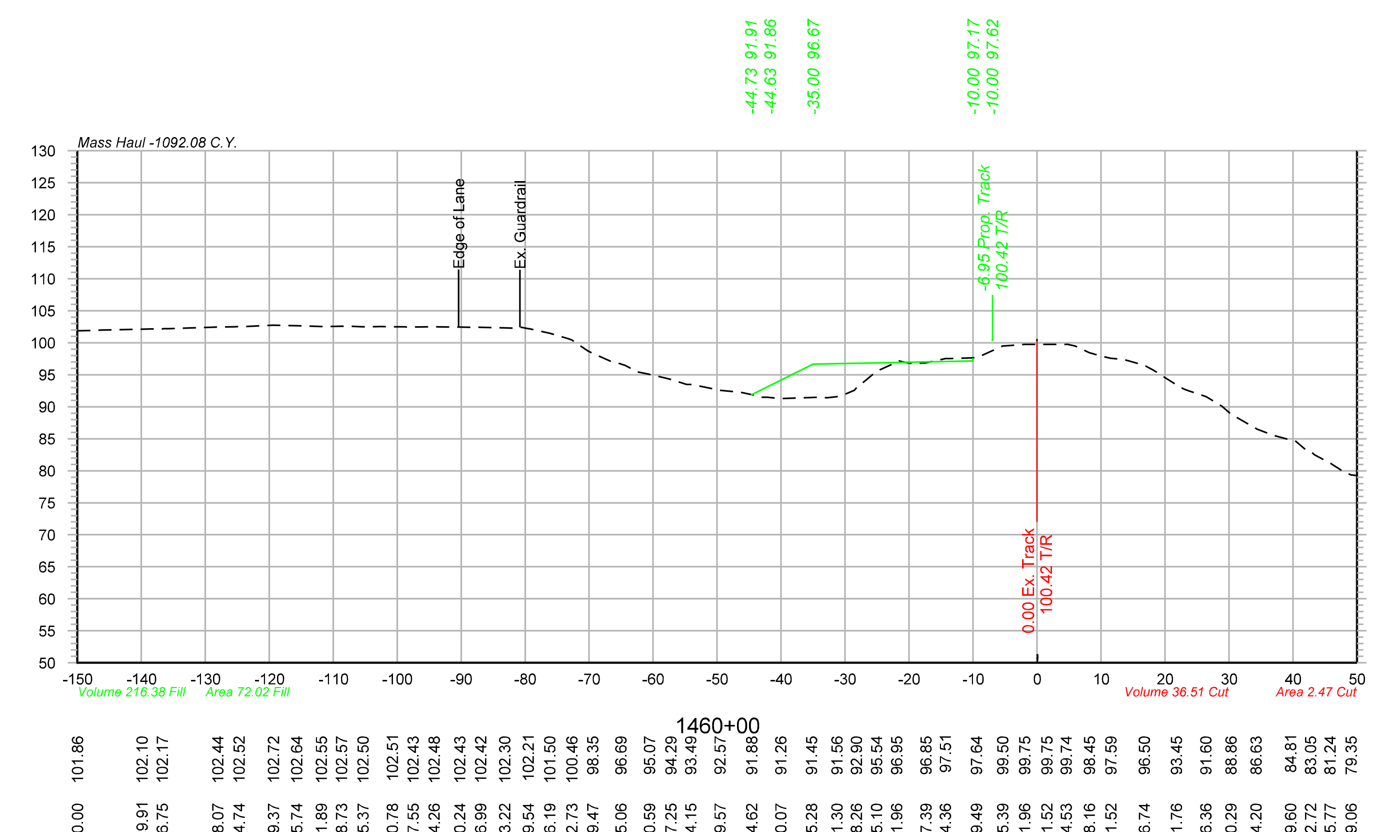
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1457+00 TO STA.1457+76









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

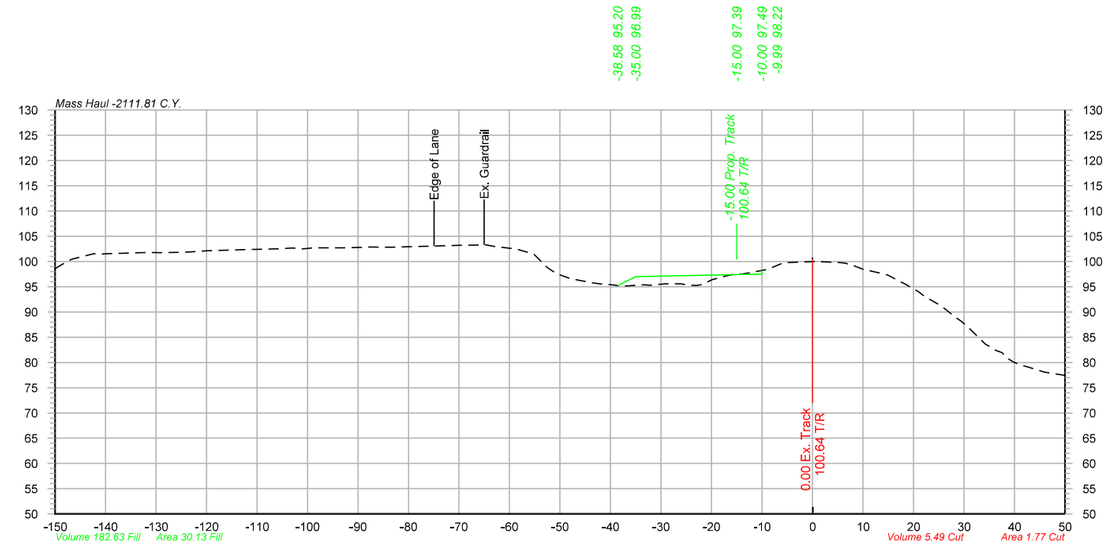
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 002 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design/Construction

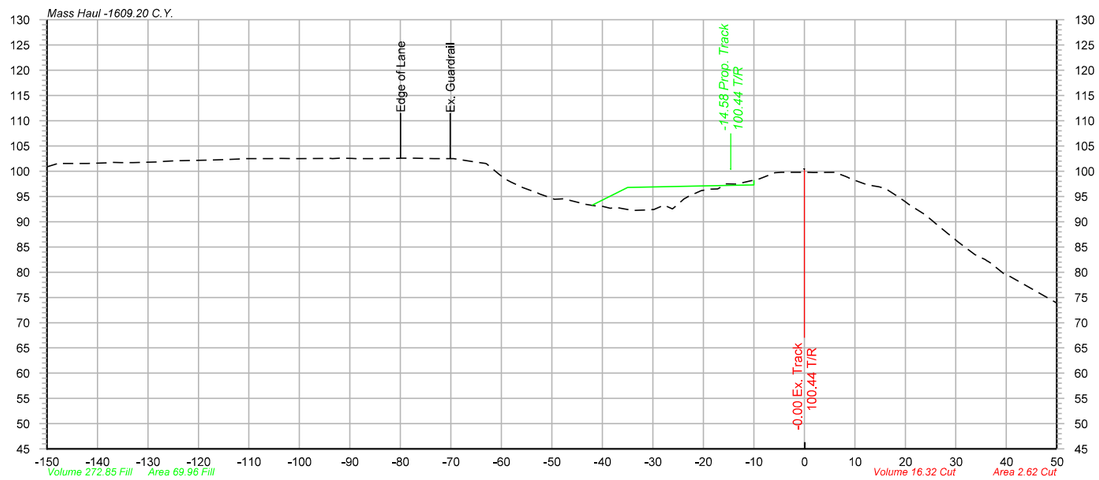
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1458+00 TO STA.1461+00



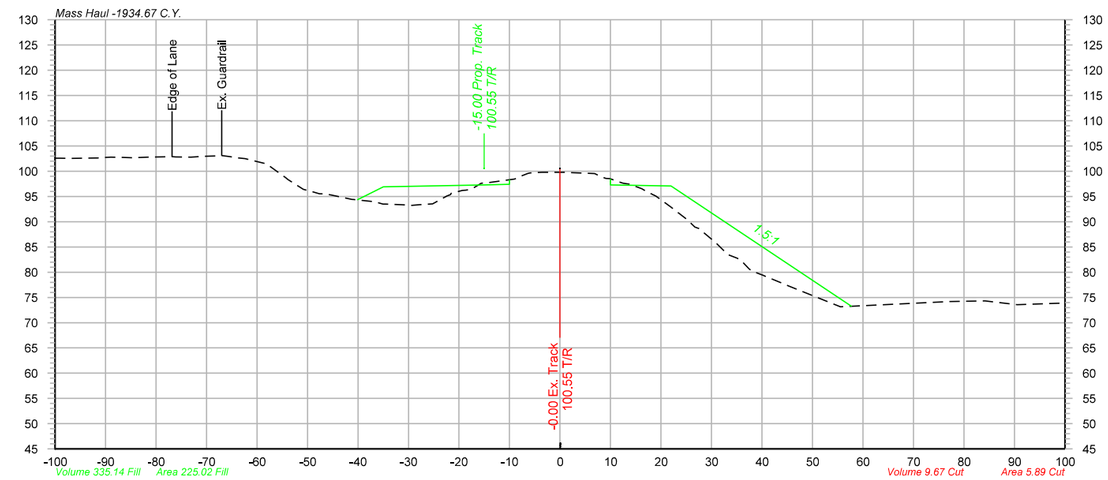
1463+00

-150.00	98.59
-146.65	100.46
-142.50	101.49
-136.89	101.61
-131.69	101.78
-124.43	101.83
-119.96	102.10
-115.72	102.25
-107.74	102.44
-103.16	102.64
-99.58	102.62
-94.33	102.70
-90.94	102.74
-87.21	102.87
-83.20	102.83
-77.36	102.98
-74.24	103.06
-69.83	103.18
-66.56	103.26
-62.87	102.94
-58.84	102.47
-55.18	101.45
-51.92	98.40
-48.09	96.67
-43.42	95.72
-39.13	95.32
-33.91	95.36
-29.15	95.58
-26.02	95.56
-22.98	95.26
-19.74	96.44
-15.54	97.50
-12.49	97.75
-8.90	98.43
-5.77	99.75
0.61	99.99
5.32	99.77
9.70	98.57
13.38	97.70
17.95	95.71
21.69	93.48
25.41	91.25
29.46	88.15
34.28	83.60
37.56	81.96
40.72	79.72
44.25	78.60
50.00	77.46



1462+00

-150.00	100.87
-141.97	101.54
-137.93	101.67
-134.64	101.70
-128.34	101.82
-125.14	102.04
-117.81	102.22
-113.06	102.38
-106.99	102.50
-103.63	102.53
-99.96	102.50
-93.75	102.53
-89.62	102.52
-84.31	102.50
-80.97	102.53
-77.54	102.58
-73.34	102.50
-69.48	102.50
-65.20	101.83
-60.36	99.31
-55.73	96.73
-52.41	95.50
-49.37	94.46
-43.34	93.44
-40.10	93.06
-34.48	92.32
-30.27	92.37
-26.14	92.54
-22.92	95.01
-18.52	96.46
-15.44	97.47
-9.43	98.36
-5.81	98.69
-0.47	99.78
6.21	99.76
9.78	98.30
13.57	97.12
17.16	95.86
20.60	93.50
24.09	91.24
28.31	87.72
33.77	83.49
36.78	81.89
39.79	79.50
50.00	73.90



1462+61

-100.00	102.59
-91.92	102.63
-86.90	102.74
-81.68	102.77
-77.27	102.86
-73.08	102.79
-67.77	103.03
-64.18	102.71
-59.50	101.79
-55.39	99.49
-50.81	96.42
-47.65	95.54
-41.37	94.45
-36.67	93.95
-31.34	93.34
-27.85	93.37
-22.35	95.12
-19.33	96.18
-15.60	97.62
-8.97	98.47
-5.94	99.68
0.90	99.79
6.87	99.52
12.11	97.74
16.22	96.54
22.06	92.80
25.15	90.45
29.83	86.70
33.25	83.50
37.45	80.65
40.47	79.28
44.90	77.43
55.55	73.13
77.16	74.19
84.18	74.33
90.55	73.57
100.00	73.90

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 003 of 139

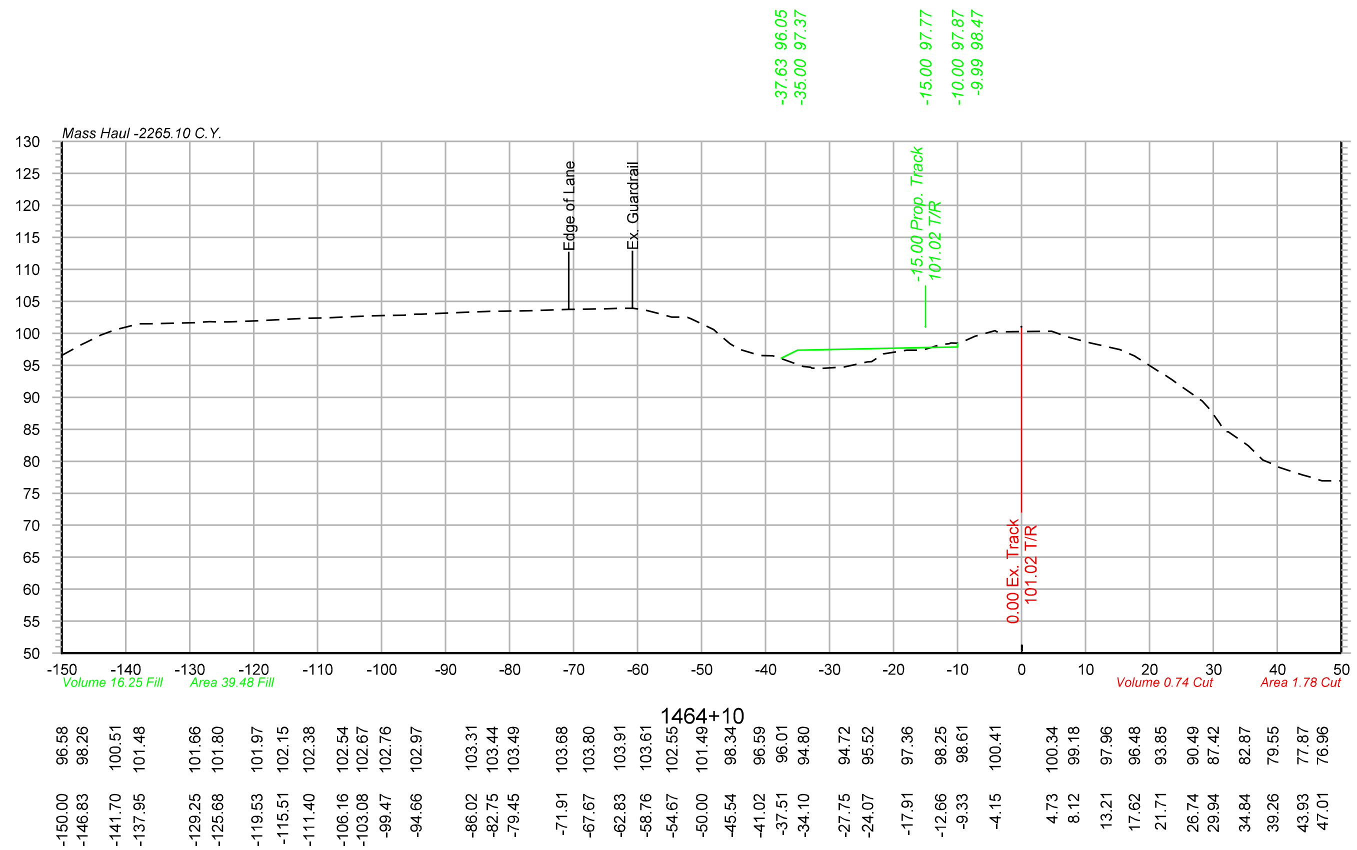
UNION PACIFIC RAILROAD

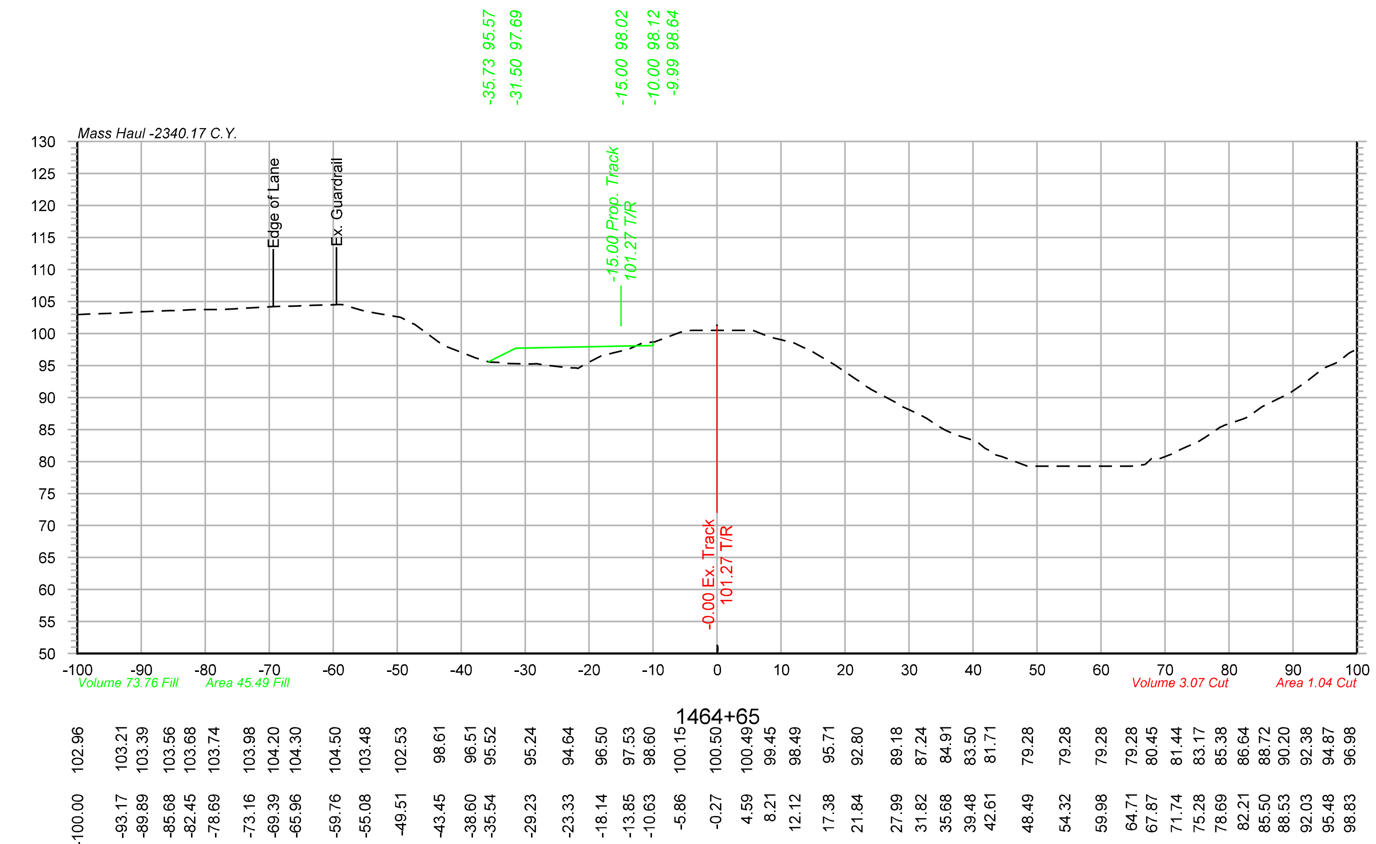
Office of Assistant Vice President
Engineering Design/Construction

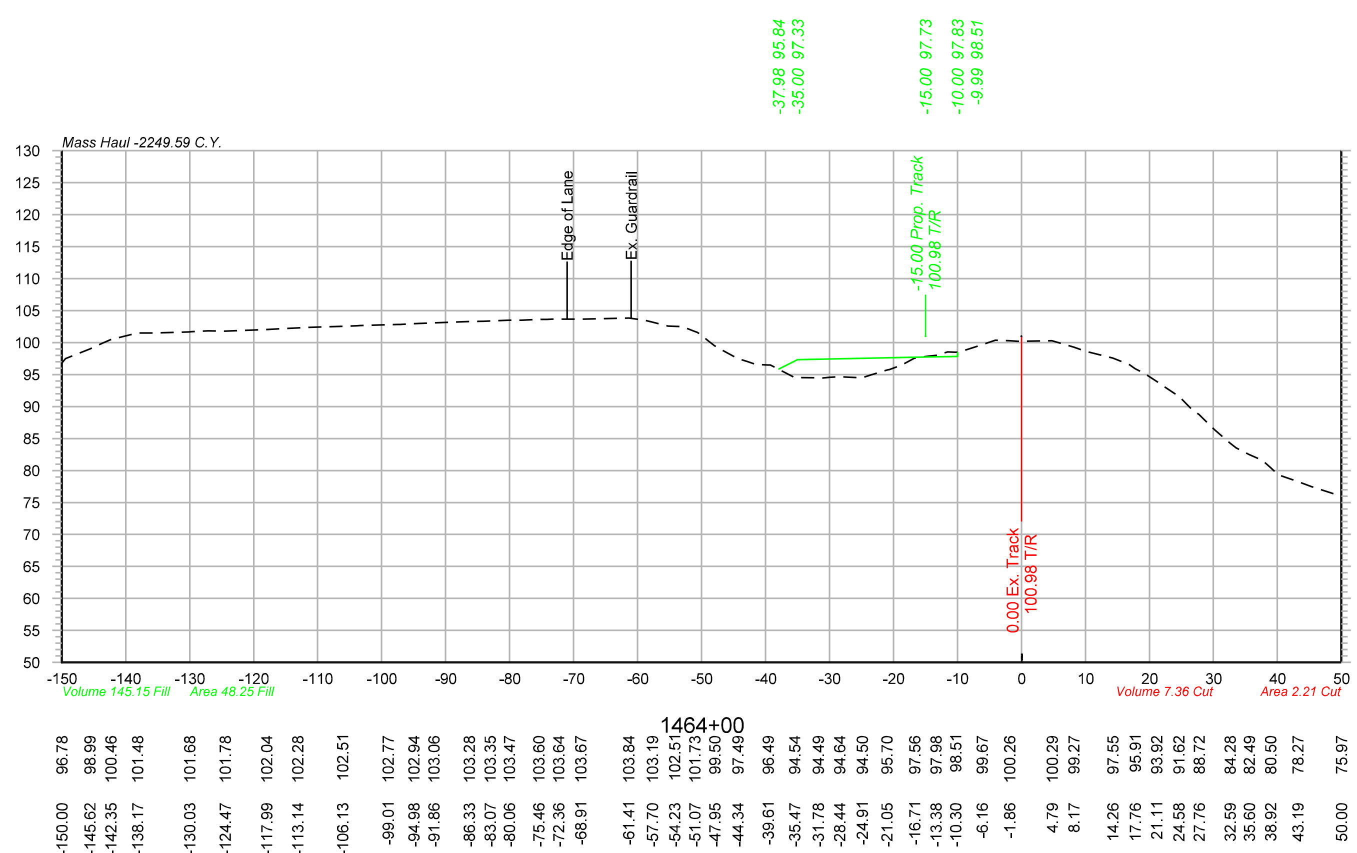
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

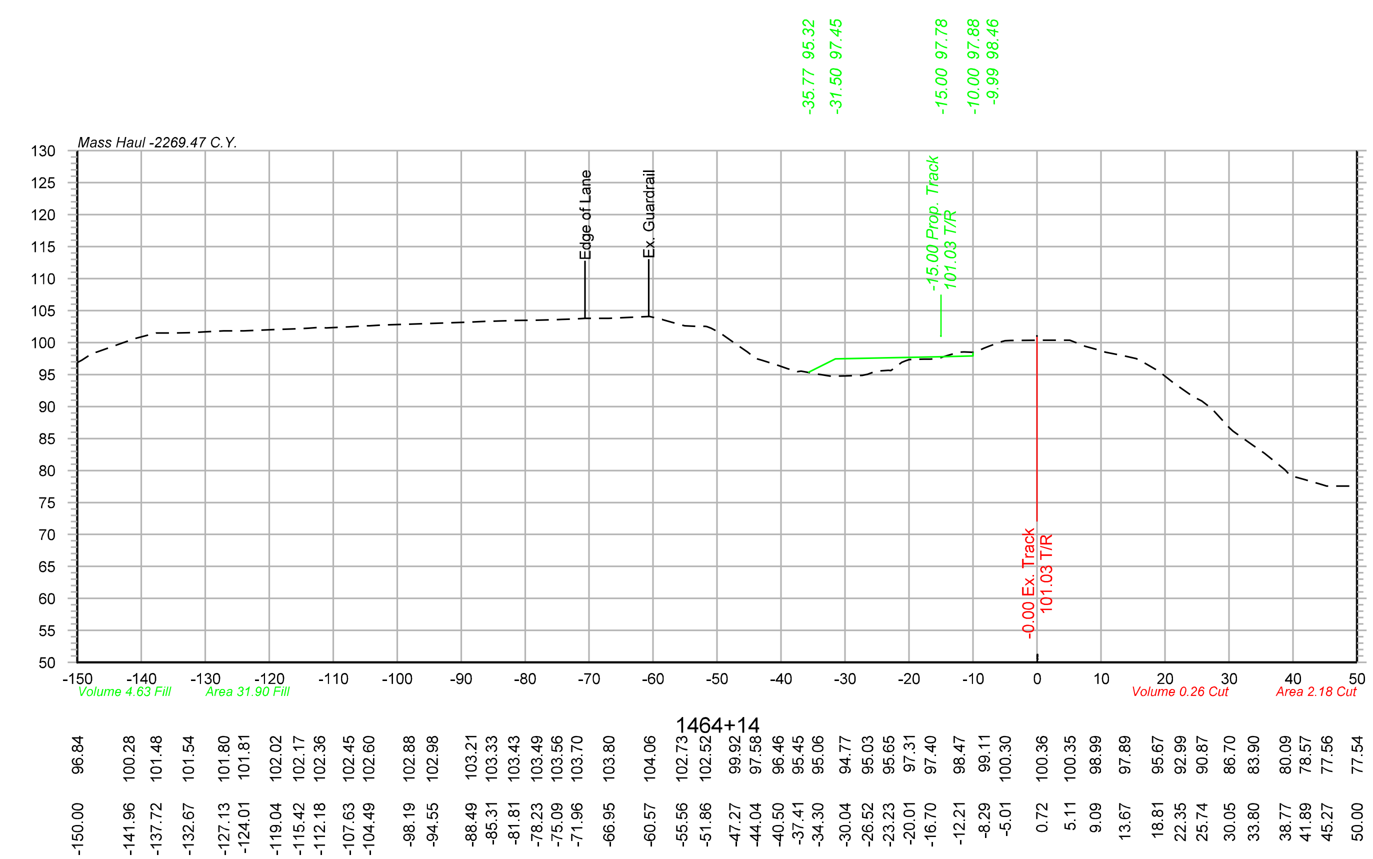
SHEET TITLE:
CROSS SECTIONS STA.1462+00 TO STA.1463+00

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omha5573\uprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

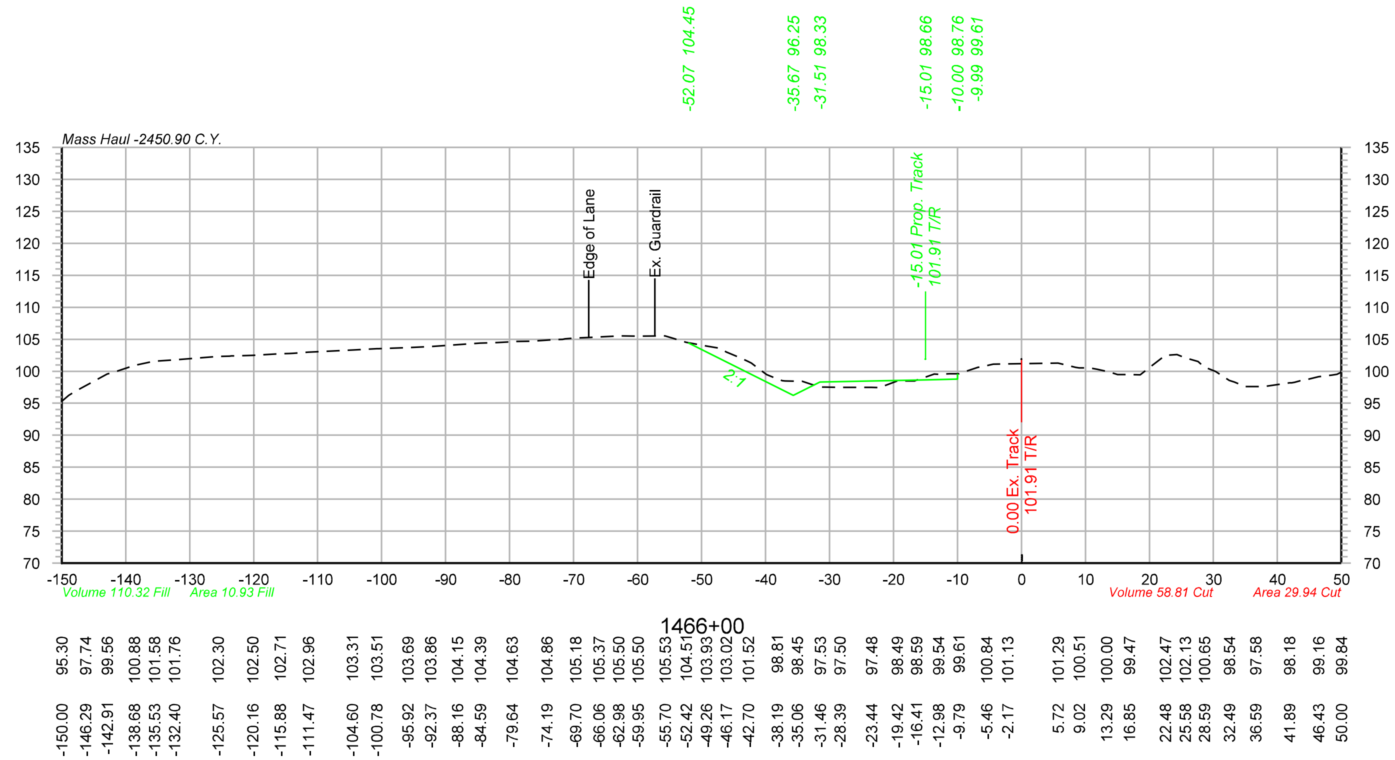
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 004 of 139

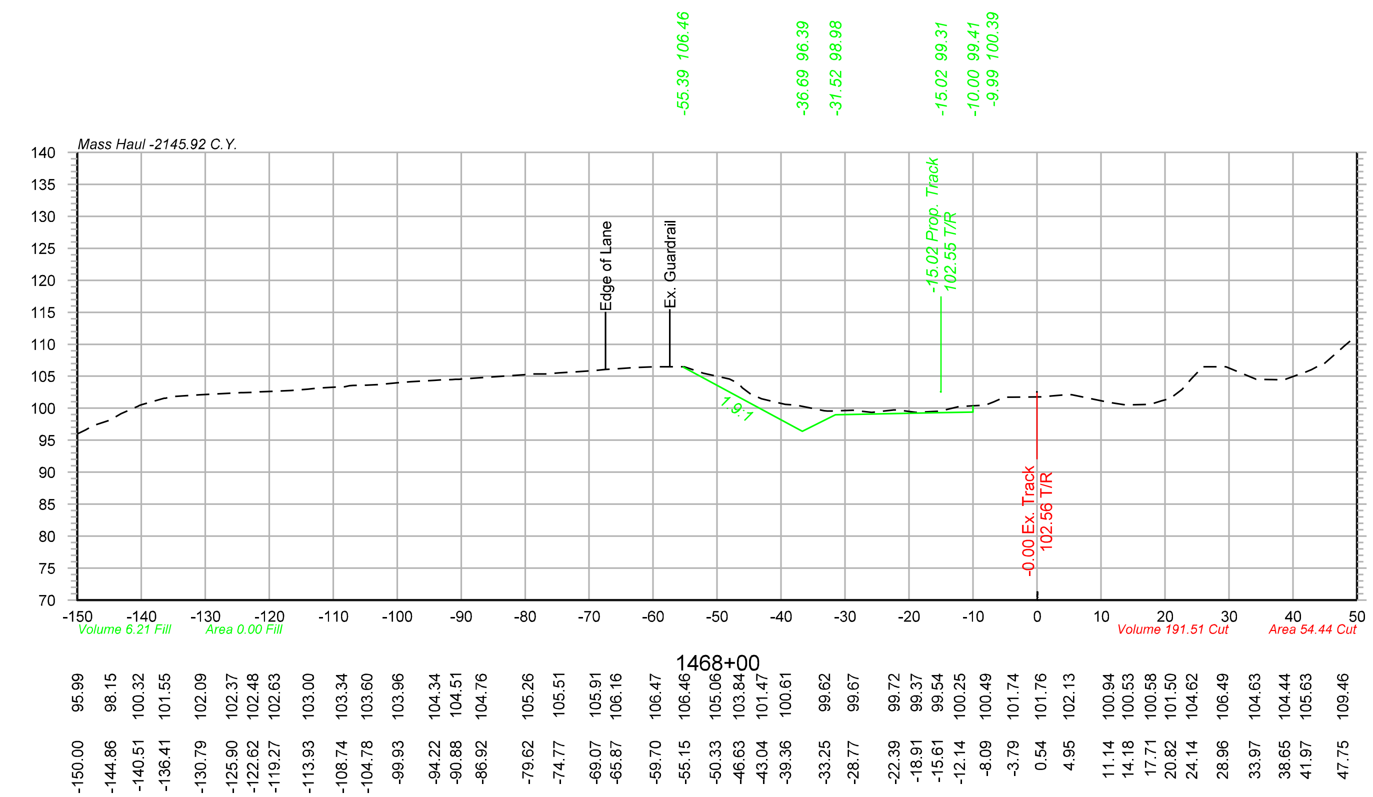
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

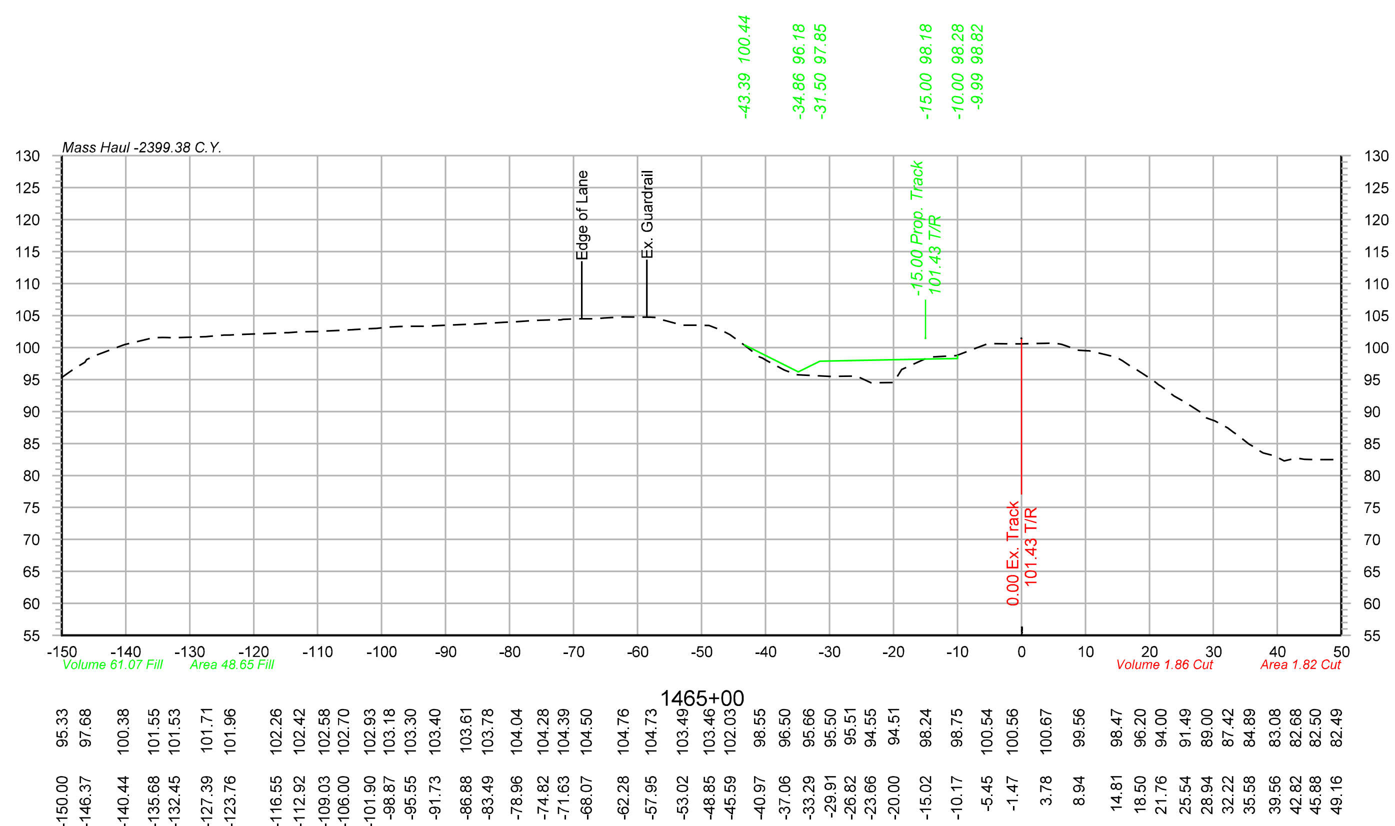
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

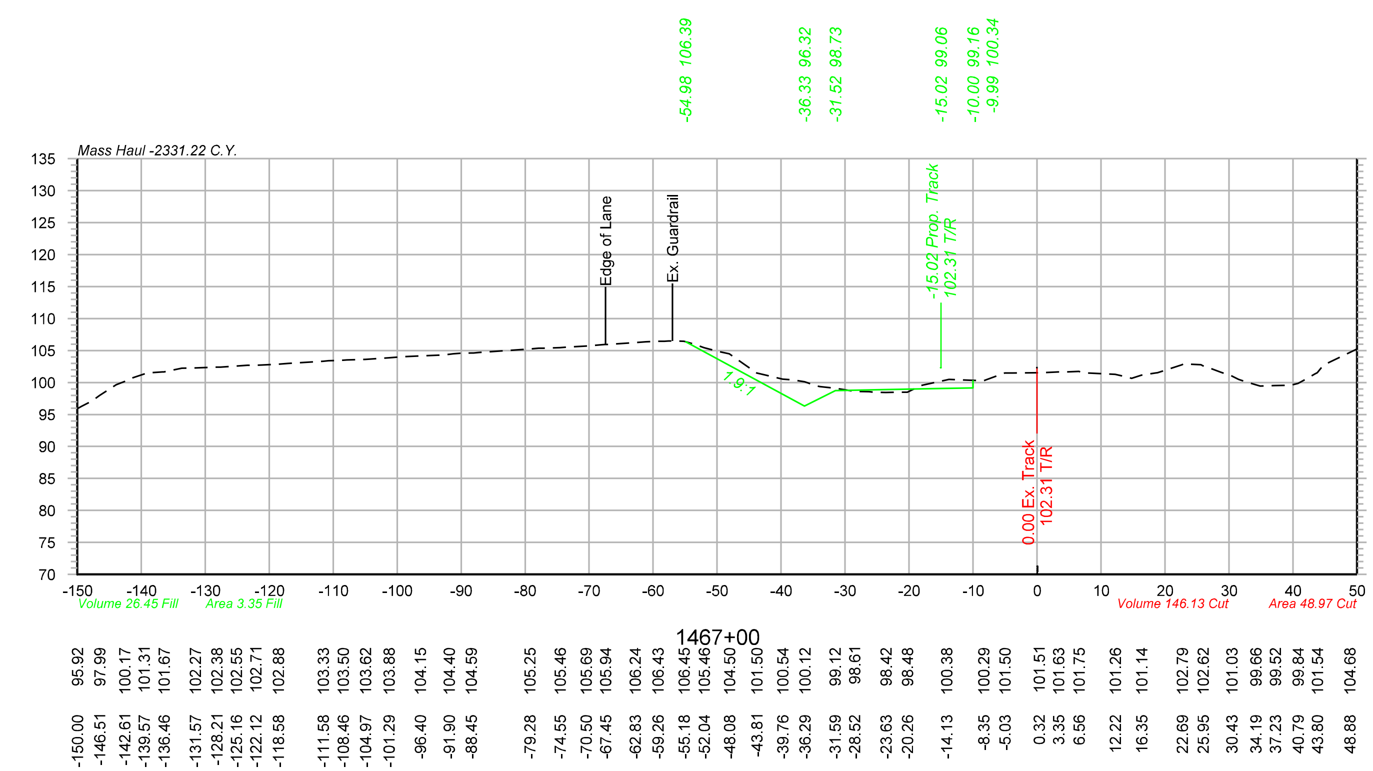
SHEET TITLE:
CROSS SECTIONS STA.1464+00 TO STA.1464+65

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014







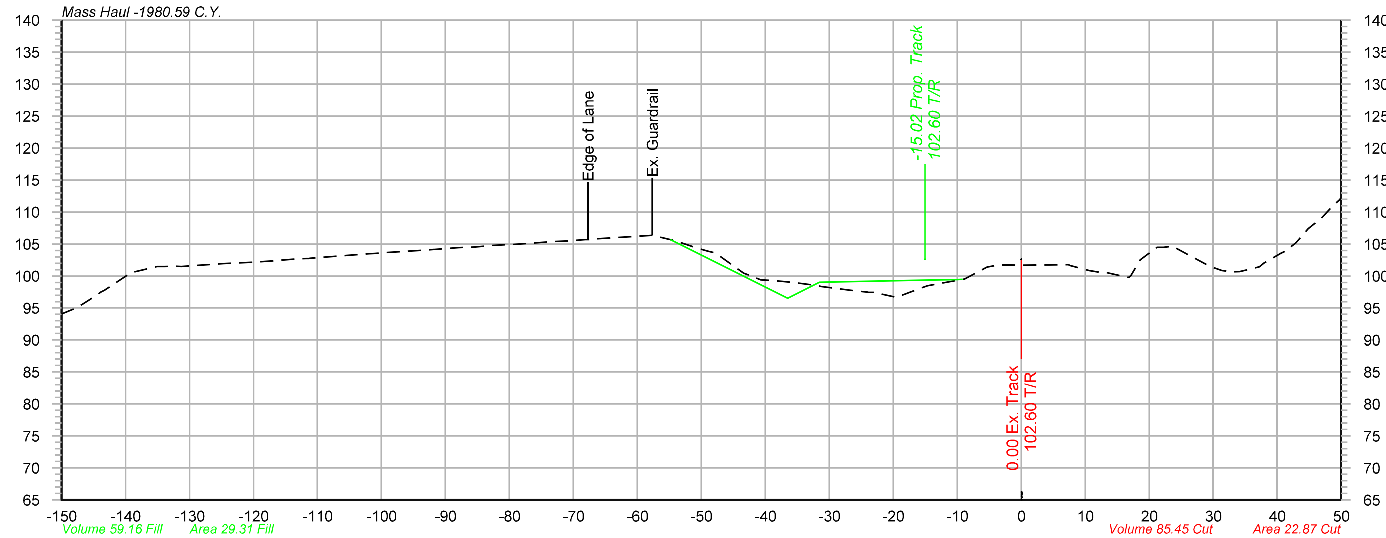


Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

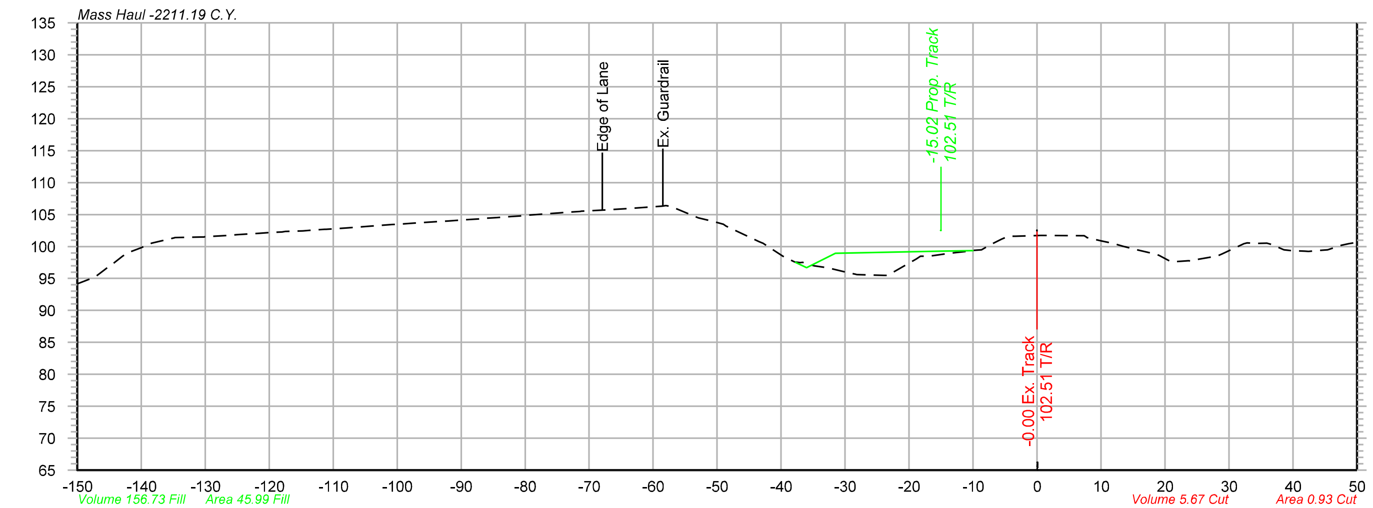
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 005 of 139	SHEET TITLE: CROSS SECTIONS STA.1465+00 TO STA.1468+00



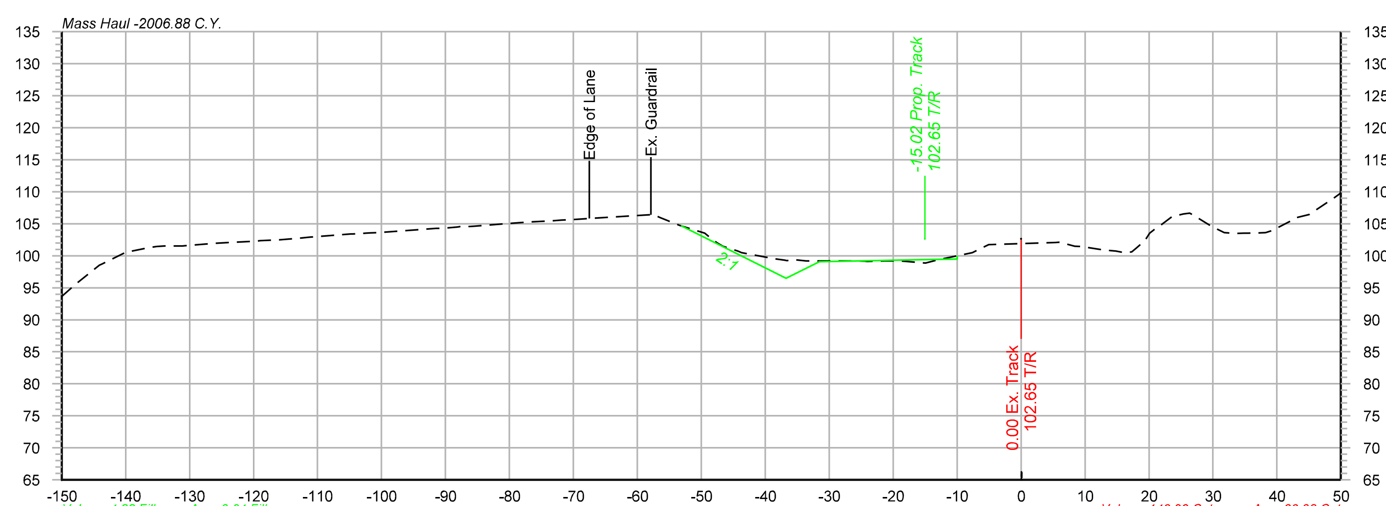
1470+00

Offset	Elevation
-150.00	94.04
-146.82	95.54
-143.26	97.76
-140.20	99.82
-135.24	101.44
-132.11	101.51
-124.68	101.92
-120.13	102.16
-117.01	102.36
-112.95	102.70
-101.92	103.49
-92.89	104.08
-87.91	104.44
-84.03	104.67
-80.41	104.89
-75.74	105.21
-70.81	105.50
-67.71	105.71
-57.64	106.37
-54.14	105.54
-51.05	104.50
-47.82	103.59
-43.36	100.46
-39.20	99.31
-35.55	98.99
-32.01	98.54
-26.69	97.75
-23.02	97.44
-19.62	96.67
-15.58	98.17
-9.62	99.39
-5.47	101.32
0.29	101.70
3.93	101.73
7.39	101.75
10.60	100.85
16.16	99.91
20.58	104.01
23.66	104.63
29.14	101.71
32.94	100.64
37.23	101.46
40.62	103.58
44.85	107.39
48.02	110.22



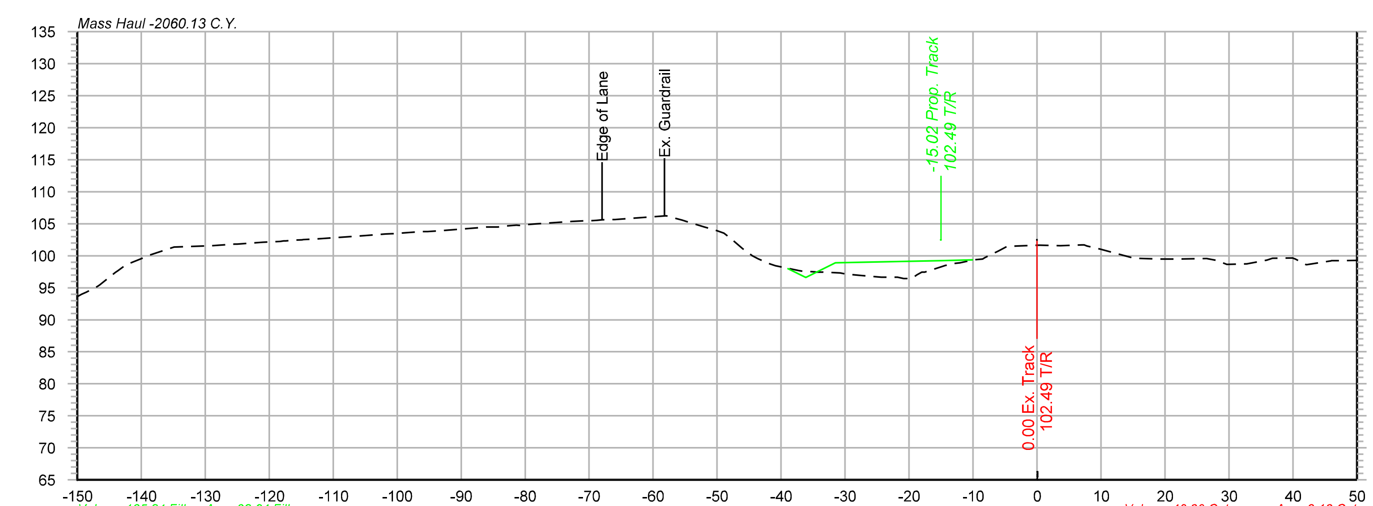
1472+00

Offset	Elevation
-150.00	94.13
-146.99	95.39
-142.86	98.50
-138.95	100.27
-134.84	101.36
-130.69	101.49
-126.40	101.75
-121.54	102.07
-118.00	102.28
-114.73	102.44
-111.33	102.67
-107.94	102.91
-100.80	103.43
-97.53	103.66
-93.64	103.91
-89.27	104.17
-86.18	104.43
-82.21	104.69
-74.46	105.28
-71.39	105.50
-67.94	105.71
-63.80	105.95
-58.54	106.30
-52.95	104.49
-49.03	103.49
-43.45	100.77
-39.84	98.57
-36.63	97.51
-33.15	96.74
-29.82	95.99
-25.36	95.51
-18.85	98.08
-13.67	98.96
-10.58	99.36
-7.37	100.23
-3.38	101.61
0.62	101.75
7.01	101.68
10.13	100.84
13.35	100.05
18.66	98.76
23.66	97.77
28.22	98.54
32.36	100.45
35.94	100.54
39.74	99.35
44.31	99.38
47.57	100.17



1469+00

Offset	Elevation
-150.00	93.65
-144.12	98.54
-140.77	100.15
-136.53	101.22
-132.57	101.51
-126.07	101.92
-119.62	102.29
-116.02	102.50
-112.89	102.75
-104.80	103.41
-101.77	103.57
-94.79	104.03
-91.49	104.26
-88.15	104.49
-79.73	105.06
-74.33	105.40
-70.06	105.63
-64.84	105.97
-58.00	106.39
-53.37	104.74
-49.45	103.51
-44.31	100.73
-38.56	99.50
-35.20	99.38
-25.93	99.18
-21.34	99.20
-14.94	98.84
-11.63	99.67
-7.62	100.49
5.39	102.09
8.40	101.49
12.90	100.92
16.55	100.46
20.12	103.53
23.61	106.10
27.45	106.04
31.76	103.62
34.85	103.51
38.24	103.60
41.84	105.30
45.06	106.45
48.97	109.08



1471+00

Offset	Elevation
-150.00	93.60
-146.89	95.19
-143.68	97.67
-140.06	99.51
-135.00	101.30
-128.95	101.57
-125.41	101.80
-121.01	102.10
-117.73	102.32
-114.64	102.52
-108.58	102.91
-104.99	103.17
-101.77	103.38
-96.11	103.79
-92.22	103.98
-87.50	104.36
-84.33	104.47
-80.91	104.72
-72.68	105.36
-68.82	105.53
-61.42	106.00
-57.94	106.24
-54.43	105.24
-50.35	104.02
-46.03	101.09
-41.78	98.73
-37.06	97.65
-33.38	97.43
-29.94	97.16
-24.35	96.64
-20.82	96.45
-17.54	97.45
-14.35	98.50
-9.96	99.37
-6.03	100.75
0.32	101.66
3.66	101.57
7.04	101.68
15.16	99.62
19.27	99.47
26.50	99.58
29.69	98.65
32.79	98.72
35.94	99.34
39.98	99.65
45.63	99.17
50.00	99.26

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

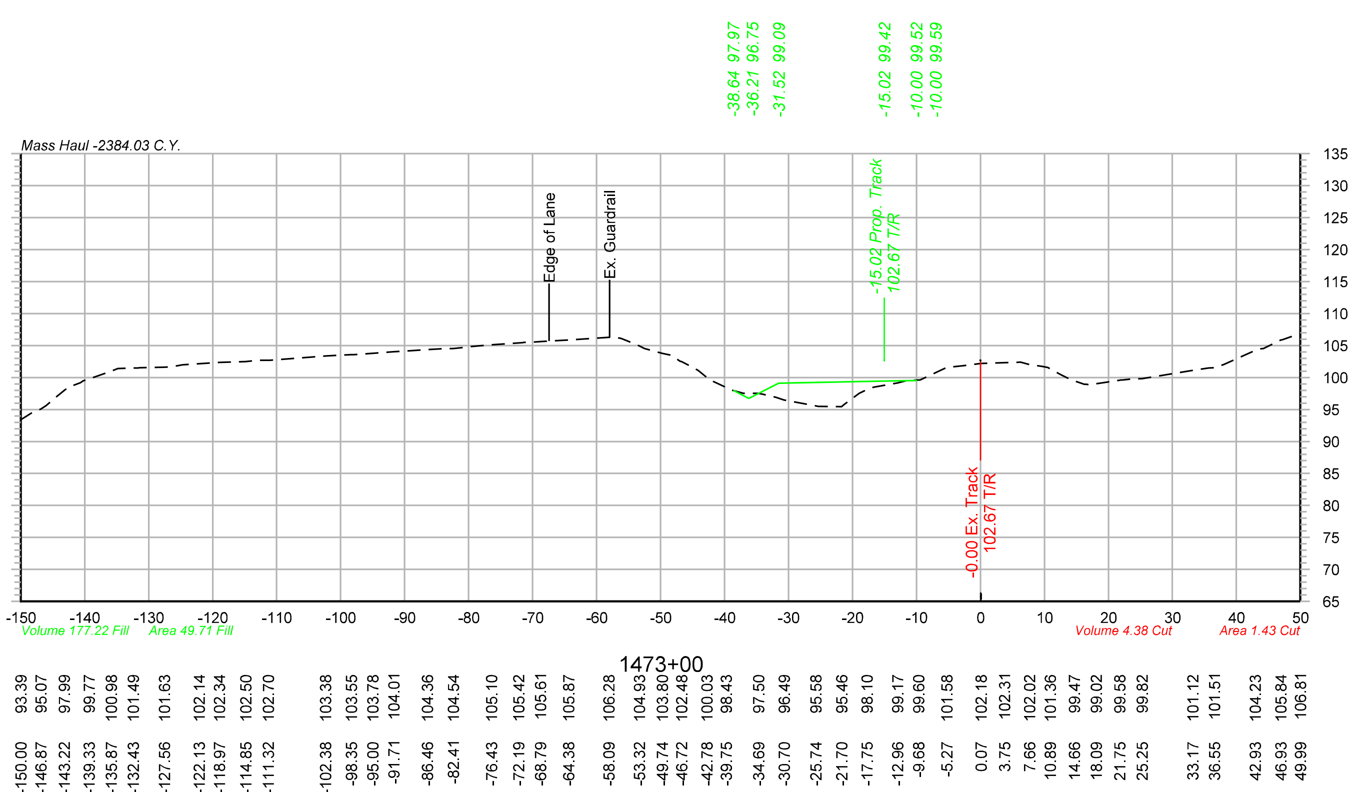
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 006 of 139

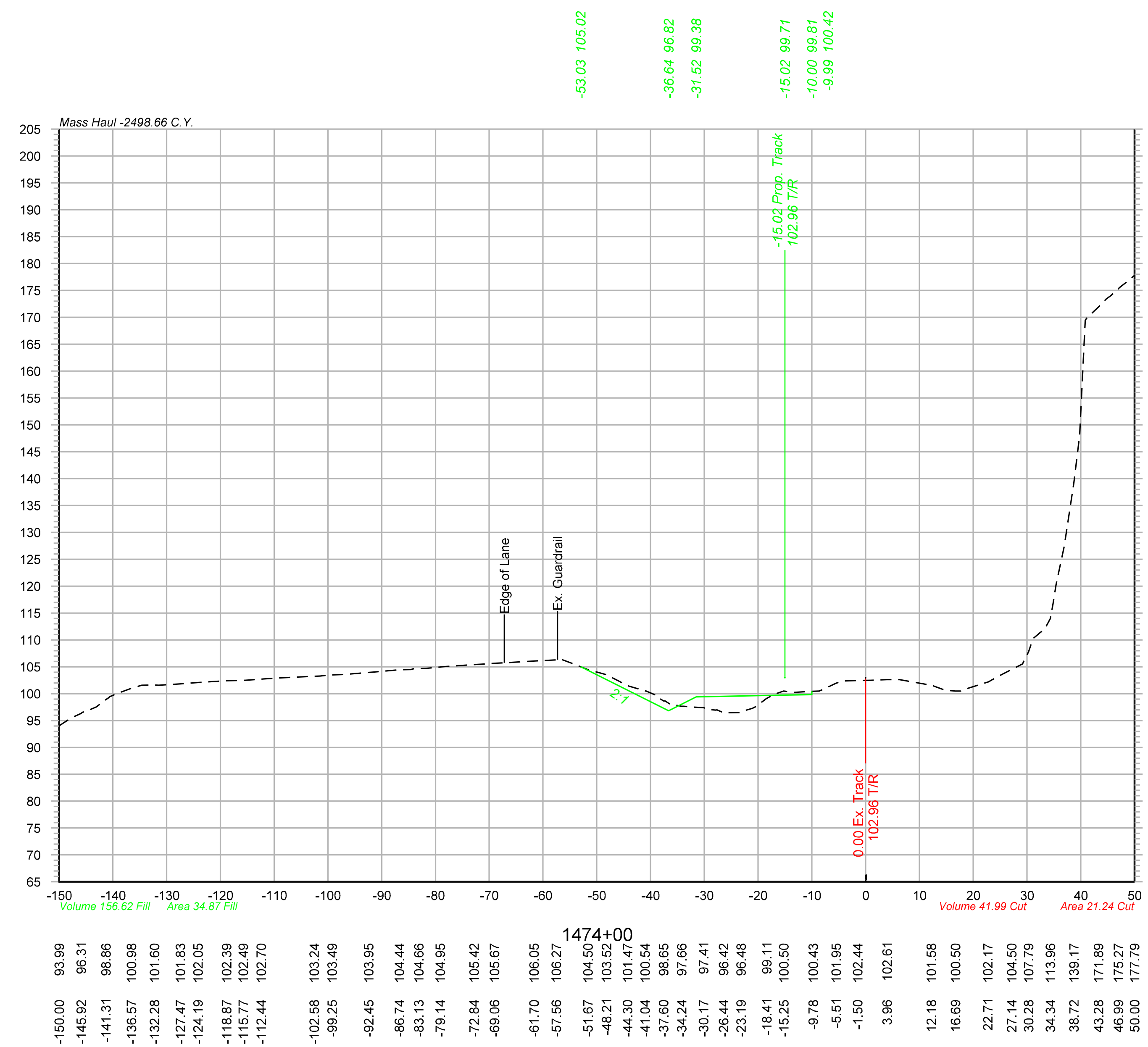
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1469+00 TO STA.1472+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

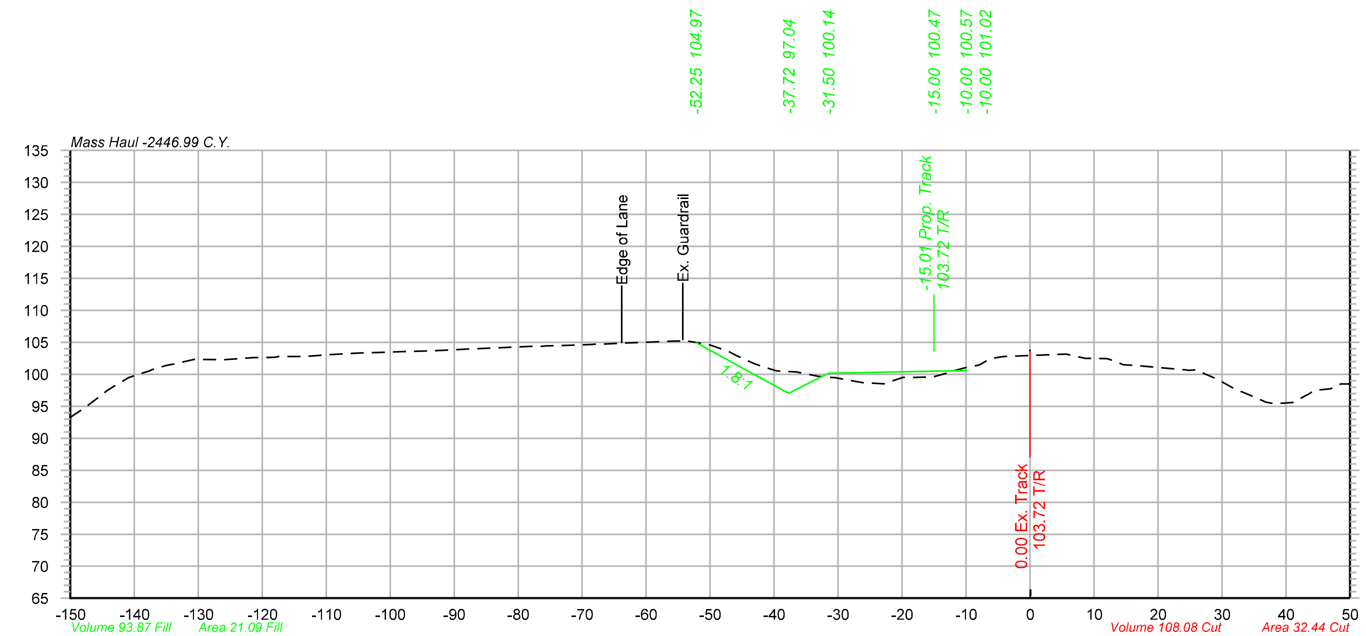




OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

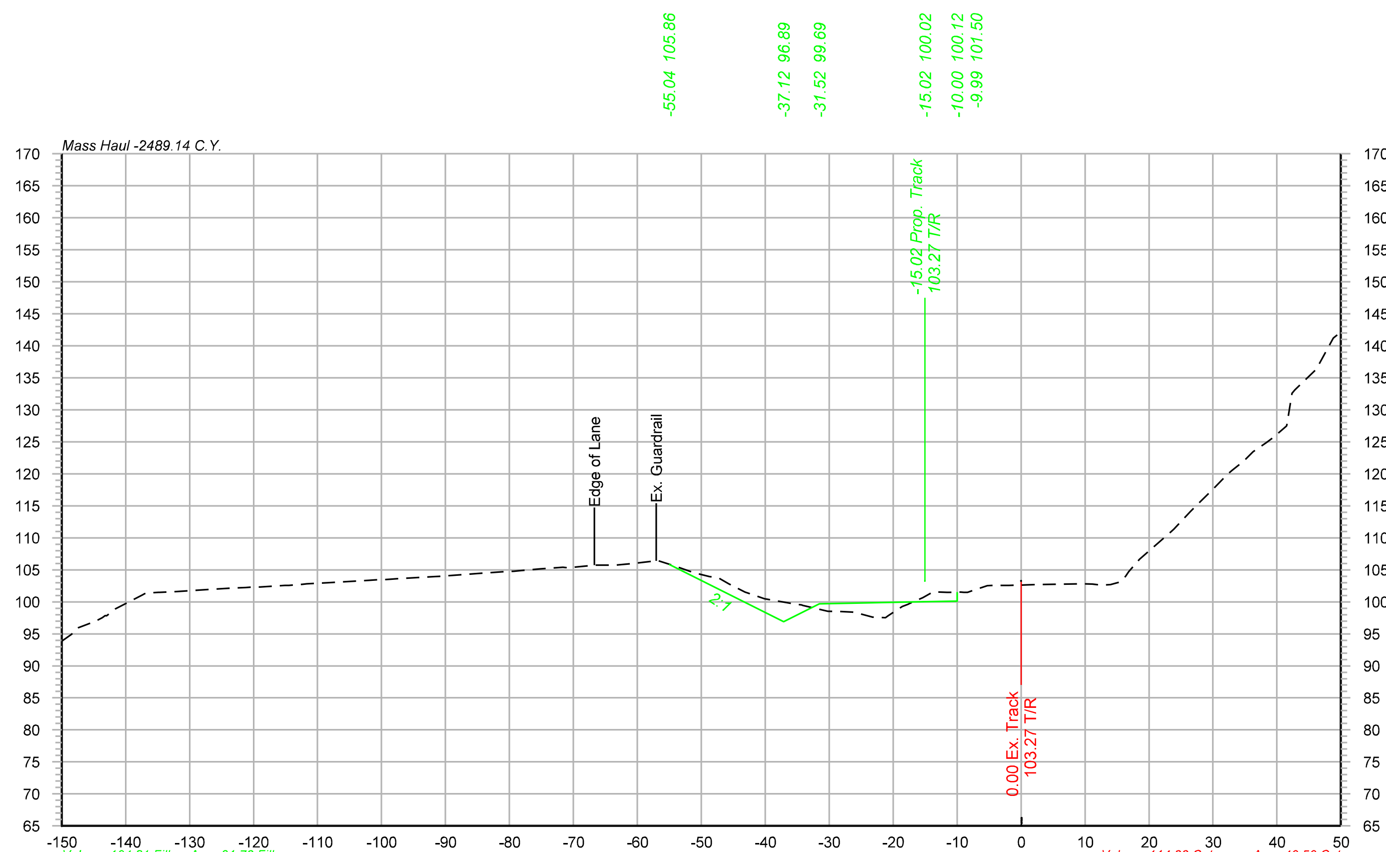
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 007 of 139	SHEET TITLE: CROSS SECTIONS STA.1473+00 TO STA.1474+00



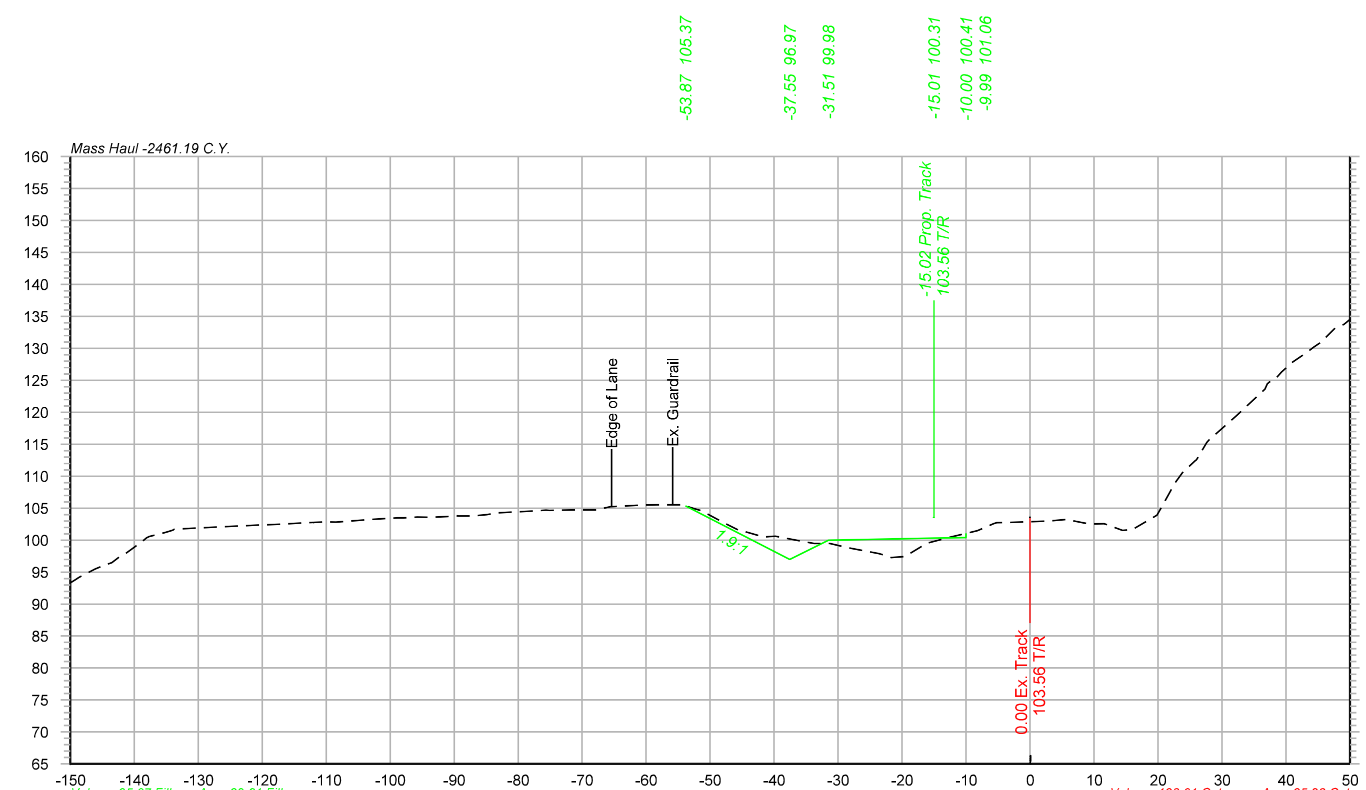
1477+00

Offset	Elevation
-150.00	93.25
-145.13	96.75
-140.89	99.48
-137.75	100.50
-133.74	101.62
-130.64	102.33
-126.01	102.30
-121.27	102.60
-118.15	102.67
-115.11	102.79
-109.47	103.07
-104.91	103.30
-100.60	103.46
-97.20	103.56
-93.75	103.68
-87.92	103.94
-82.76	104.17
-78.03	104.38
-73.39	104.50
-68.45	104.68
-63.81	104.86
-60.41	104.98
-55.46	105.18
-51.06	104.77
-46.96	103.51
-43.18	101.72
-39.64	100.51
-36.48	100.37
-33.17	99.70
-26.17	98.70
-23.15	98.51
-19.80	99.53
-15.90	99.55
-12.01	100.54
-7.96	101.45
-4.67	102.69
-0.76	102.93
5.62	103.16
9.61	102.49
13.43	101.98
16.84	101.37
24.62	100.65
28.90	99.40
32.41	97.50
36.84	95.66
41.24	95.62
44.43	97.48
48.57	98.48



1475+00

Offset	Elevation
-150.00	93.87
-144.71	96.97
-141.62	98.89
-137.42	101.08
-132.01	101.63
-127.52	101.90
-123.39	102.16
-119.55	102.36
-115.10	102.55
-111.68	102.81
-108.42	103.00
-101.99	103.37
-98.72	103.52
-91.75	103.96
-84.19	104.50
-81.15	104.68
-75.19	105.13
-71.62	105.39
-67.01	105.69
-63.43	105.75
-56.81	106.43
-53.57	105.38
-48.71	103.95
-43.16	101.51
-40.13	100.50
-35.08	99.63
-30.19	98.52
-26.38	98.39
-23.21	97.62
-18.56	99.27
-15.36	100.67
-11.57	101.50
-8.36	101.48
-5.27	102.54
-1.91	102.58
2.19	102.68
9.61	102.80
14.00	102.67
18.53	106.63
23.45	110.96
26.50	114.11
30.01	117.60
34.83	122.00
38.39	124.92
41.48	127.45
46.15	136.32
49.65	141.85



1476+00

Offset	Elevation
-150.00	93.31
-146.15	95.47
-142.27	97.45
-138.64	99.89
-135.33	101.17
-125.88	102.09
-122.25	102.28
-117.27	102.50
-112.85	102.73
-108.48	102.81
-102.98	103.22
-99.50	103.44
-95.79	103.62
-91.09	103.68
-87.13	103.76
-83.08	104.27
-79.01	104.48
-75.65	104.68
-71.00	104.72
-67.80	104.73
-61.49	105.45
-58.27	105.52
-54.37	105.52
-51.23	104.56
-47.71	102.65
-43.77	101.10
-40.67	100.57
-35.39	99.78
-31.29	99.48
-26.73	98.49
-23.62	97.91
-19.50	97.43
-16.15	99.50
-12.24	100.51
-8.21	101.50
-5.21	102.74
2.87	102.99
8.44	102.71
11.55	102.56
15.45	101.60
19.82	103.91
23.82	110.56
27.62	115.27
32.28	119.50
36.71	123.60
41.03	127.82
44.32	130.17
47.59	133.08

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

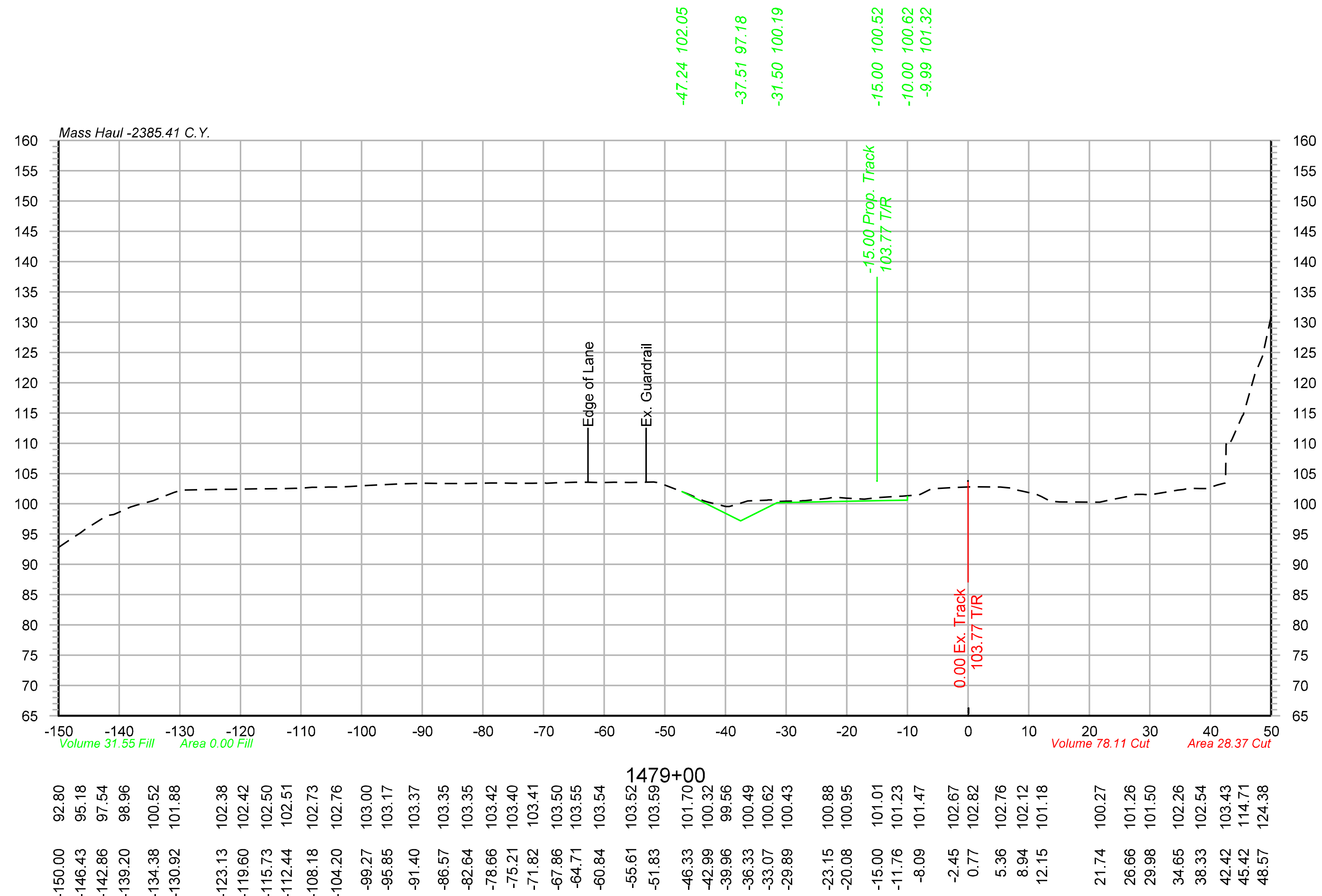
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 008 of 139

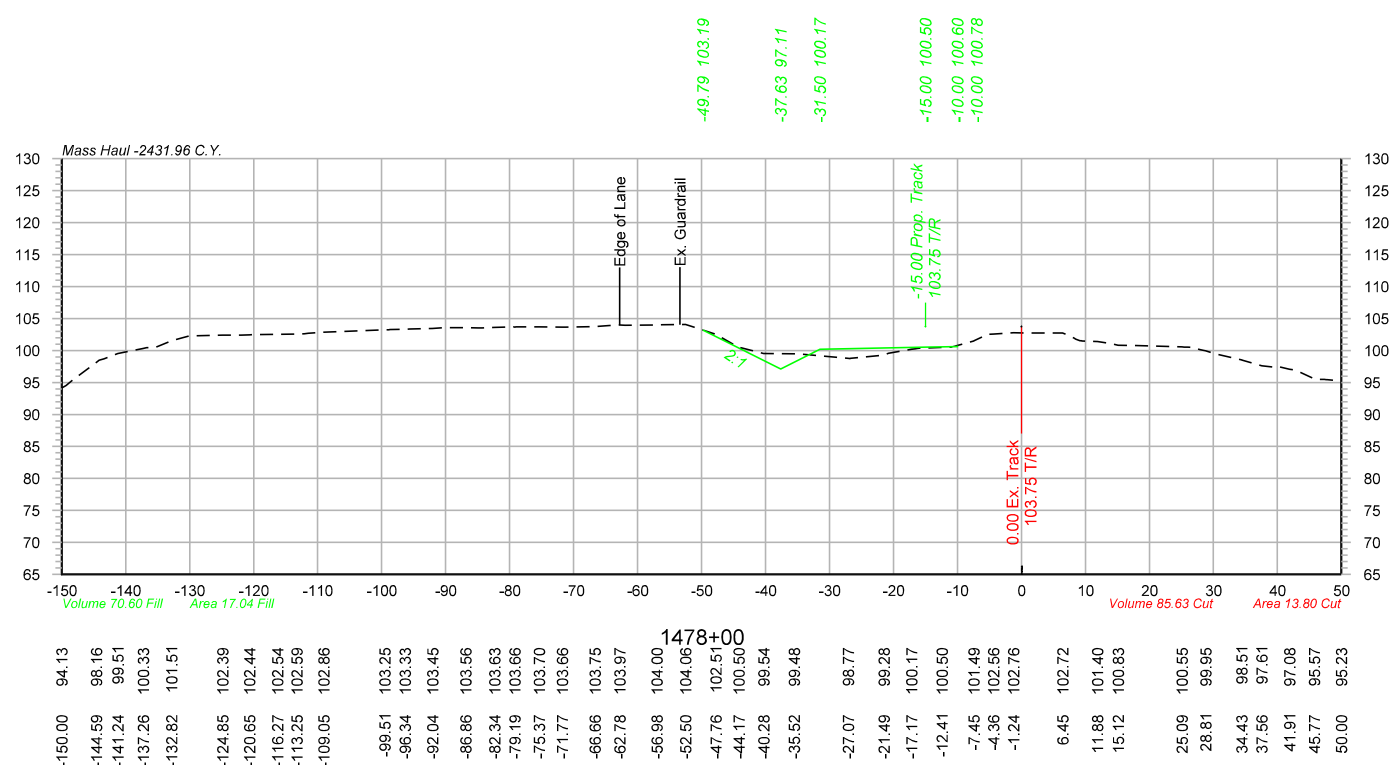
UNION PACIFIC RAILROAD

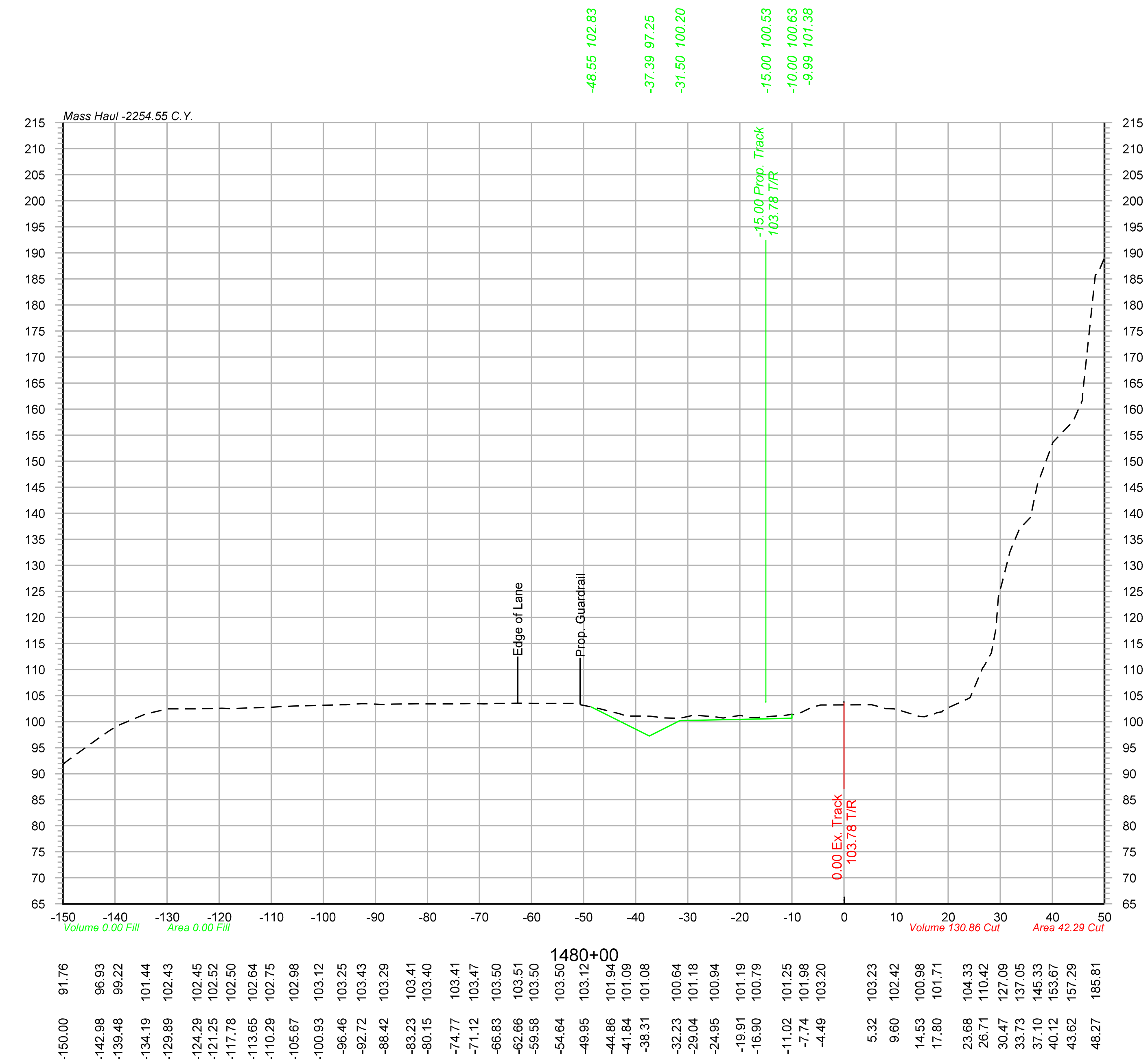
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1475+00 TO STA.1477+00



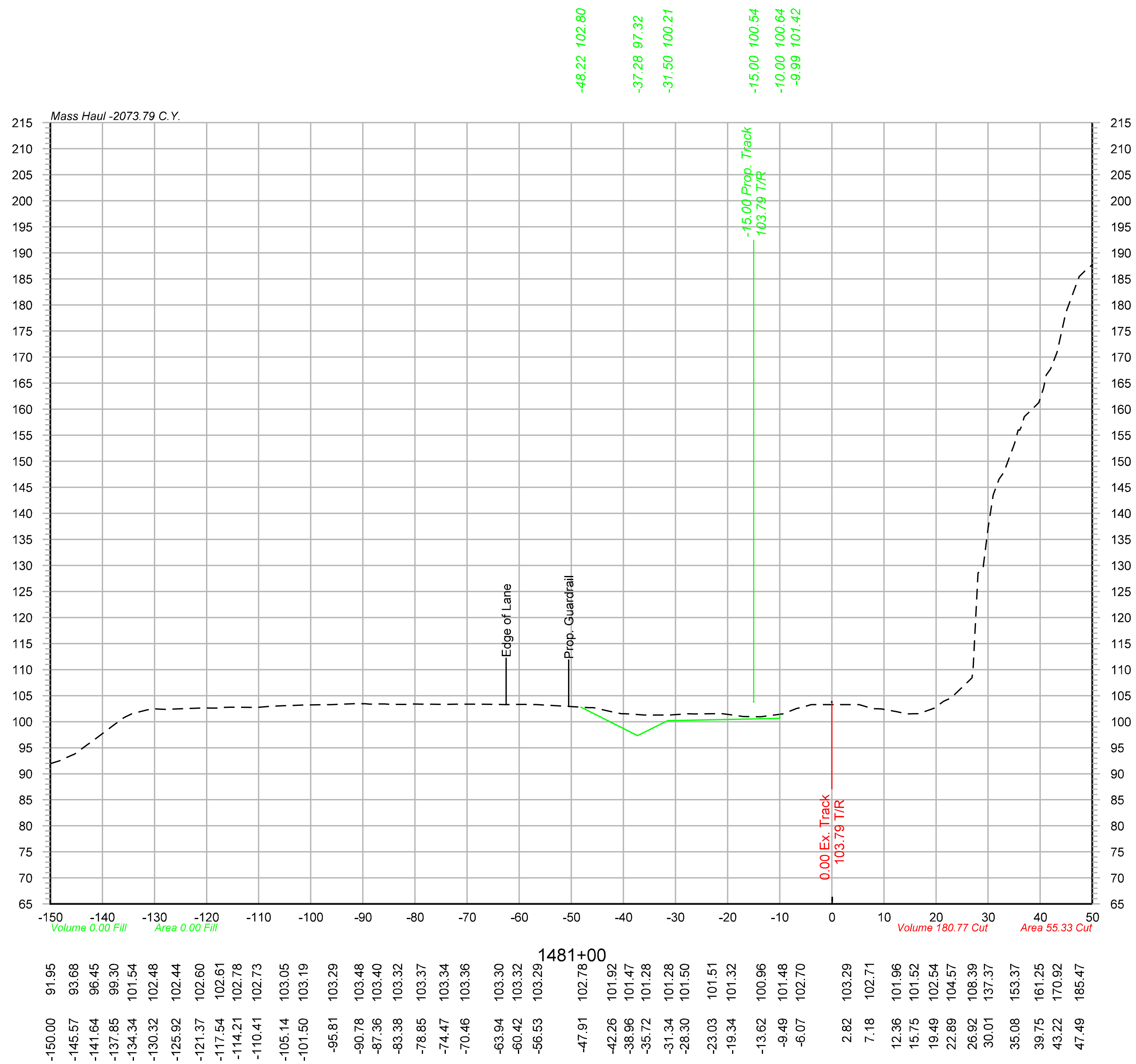


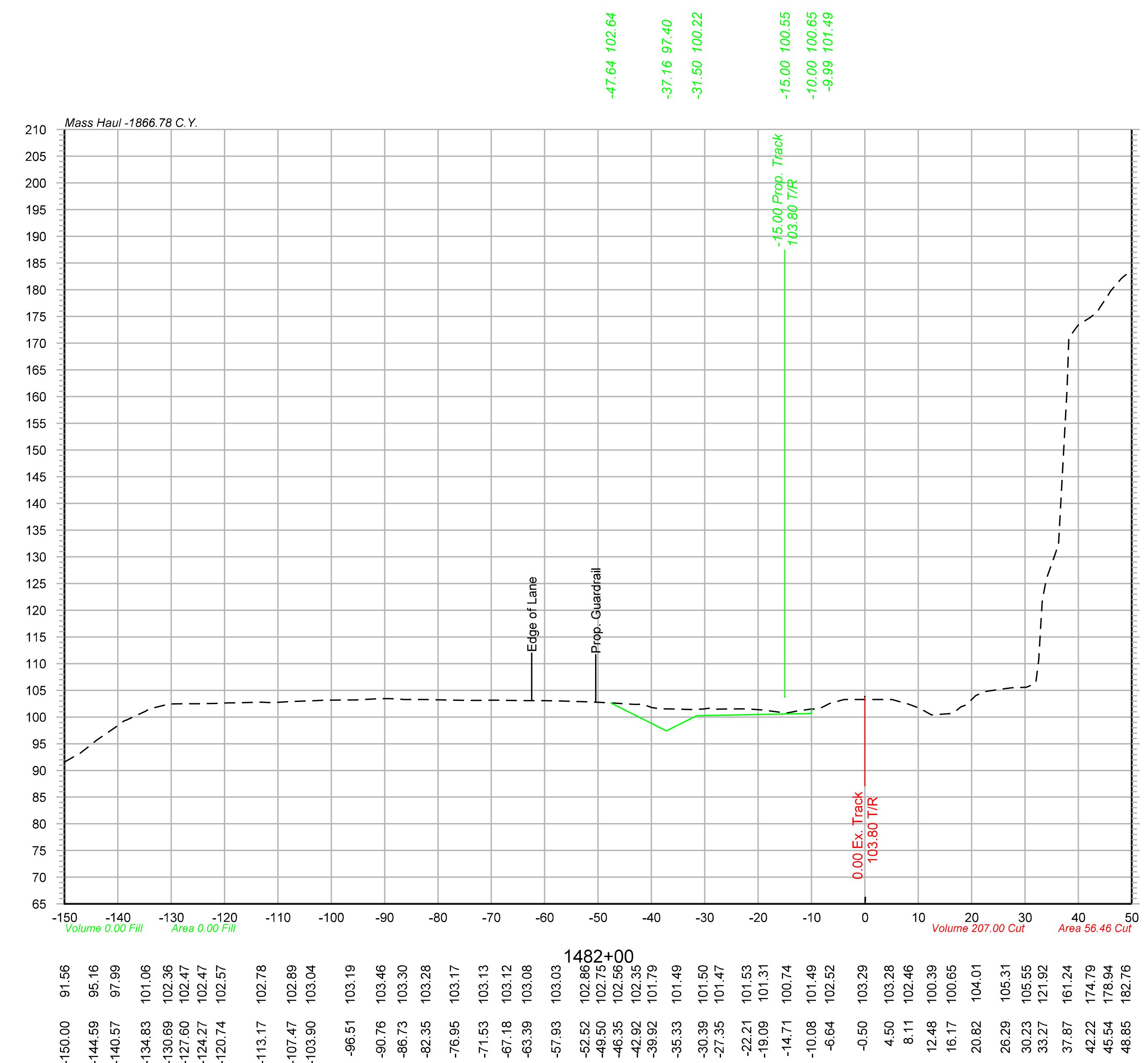


Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 009 of 139	SHEET TITLE: CROSS SECTIONS STA.1478+00 TO STA.1480+00





Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200, Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

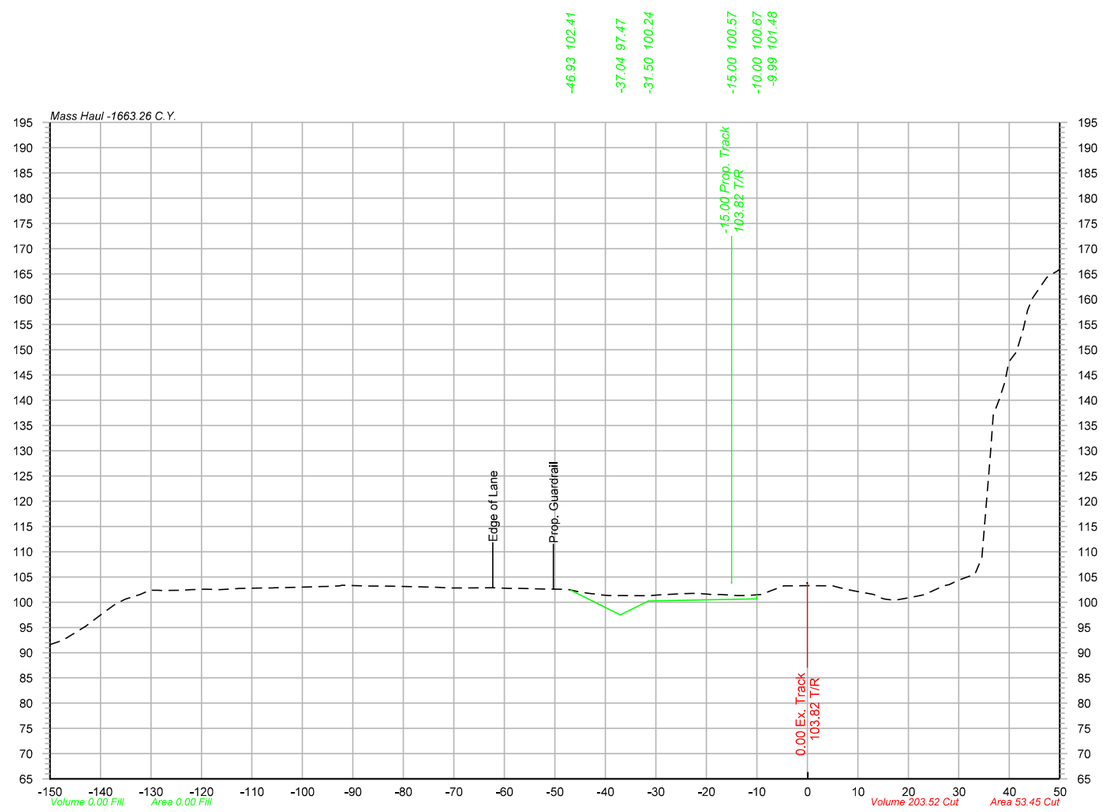
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 010 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

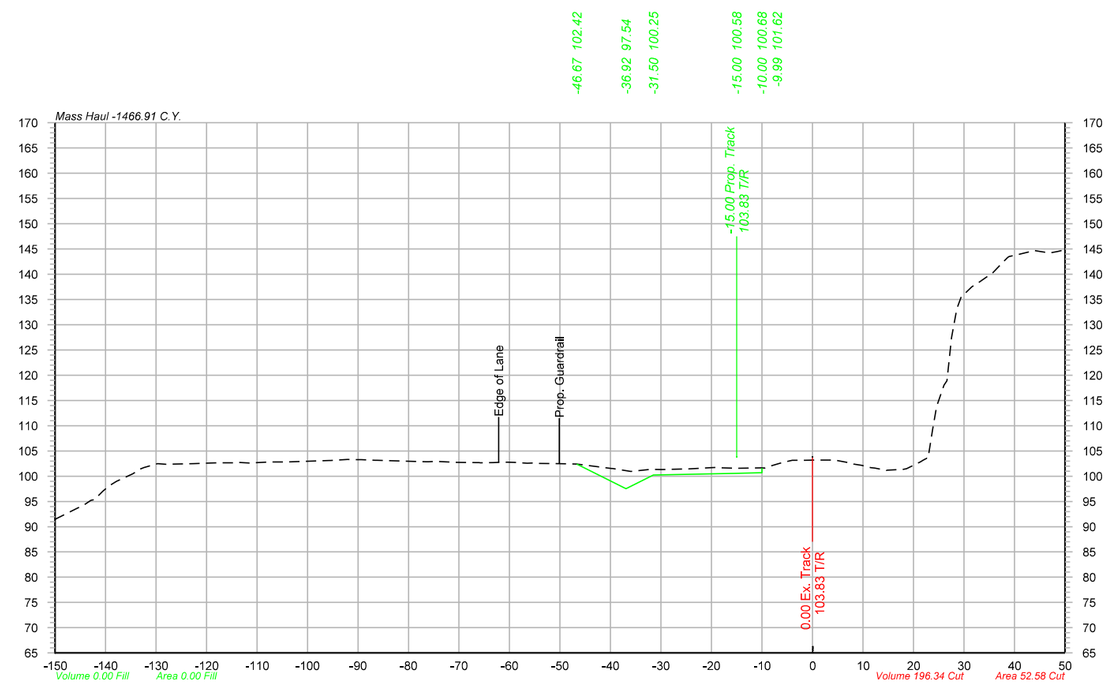
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1481+00 TO STA.1482+00



1483+00

-150.00	91.61
-146.75	92.91
-142.97	95.18
-139.41	97.89
-135.66	100.31
-132.29	101.50
-128.63	102.36
-123.88	102.38
-120.64	102.52
-117.42	102.51
-112.76	102.71
-107.57	102.81
-98.48	103.03
-95.30	103.12
-92.15	103.35
-86.22	103.18
-79.67	103.10
-74.36	102.98
-70.96	102.81
-62.28	102.85
-58.92	102.75
-54.02	102.67
-49.11	102.56
-45.14	102.05
-41.79	101.61
-36.64	101.31
-31.89	101.27
-28.85	101.48
-24.36	101.67
-19.45	101.55
-13.94	101.33
-9.06	101.55
-6.00	102.73
0.21	103.27
5.08	103.22
9.28	102.25
13.15	101.53
16.75	100.44
21.11	101.08
25.88	102.72
29.41	104.11
33.03	105.47
36.29	129.57
39.86	147.34
43.63	157.79
47.33	164.16



1484+00

-150.00	91.40
-145.72	93.61
-142.20	95.37
-137.85	98.99
-134.66	100.46
-129.69	102.49
-126.36	102.39
-122.57	102.50
-119.26	102.61
-114.03	102.65
-107.51	102.83
-104.14	102.82
-95.71	103.09
-92.09	103.33
-86.60	103.16
-82.20	103.02
-77.95	102.89
-74.48	102.94
-70.29	102.74
-66.65	102.68
-63.19	102.70
-59.03	102.73
-55.50	102.62
-50.16	102.50
-46.65	102.42
-40.15	101.56
-35.98	100.95
-32.01	101.36
-24.94	101.42
-20.04	101.69
-14.97	101.55
-10.12	101.63
-6.72	102.50
-1.40	103.16
4.41	103.18
8.15	102.40
11.55	101.69
14.58	101.16
18.00	101.37
21.42	102.88
24.59	113.81
28.59	133.18
32.78	138.24
37.55	142.21
43.40	144.52
46.98	144.19
50.00	144.71

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

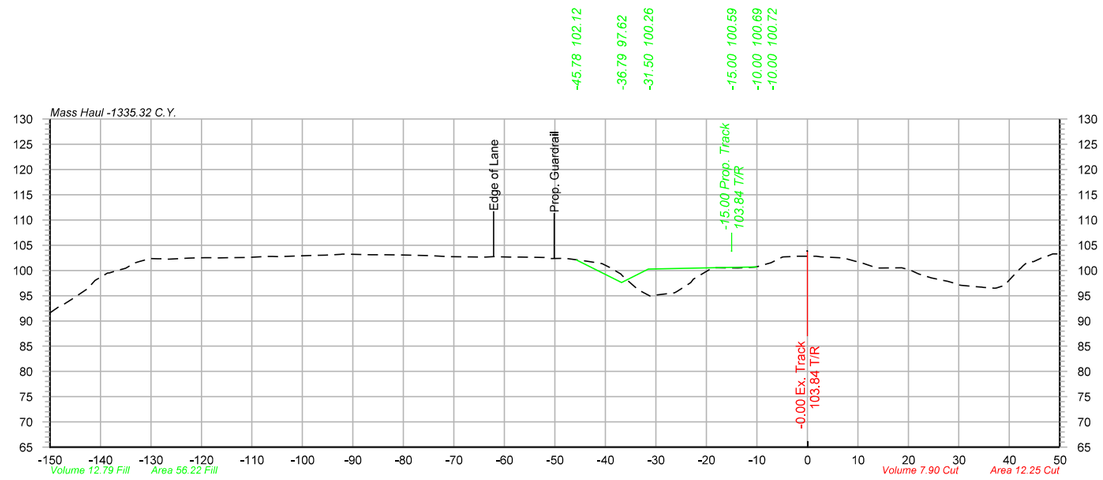
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 011 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

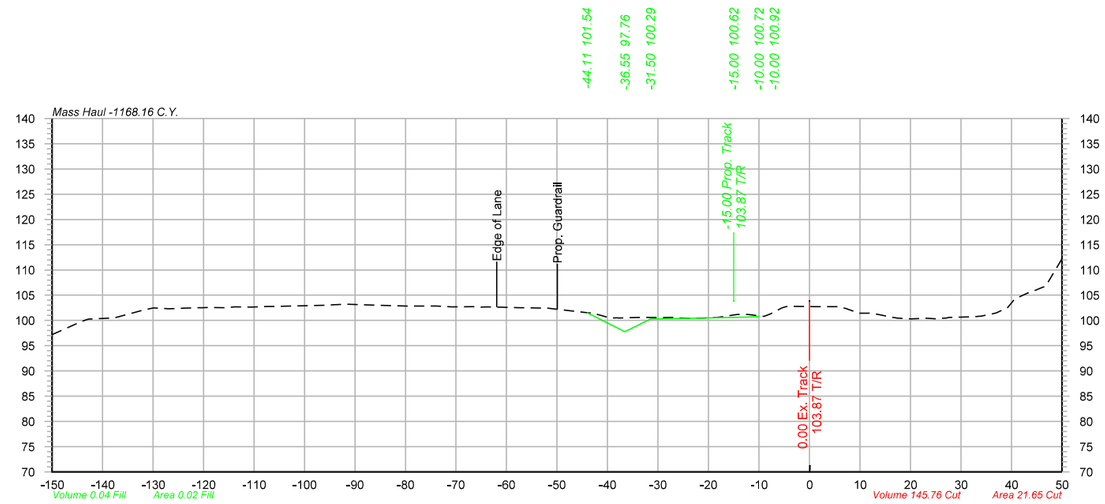
SHEET TITLE:
CROSS SECTIONS STA.1483+00 TO STA.1484+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55173\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



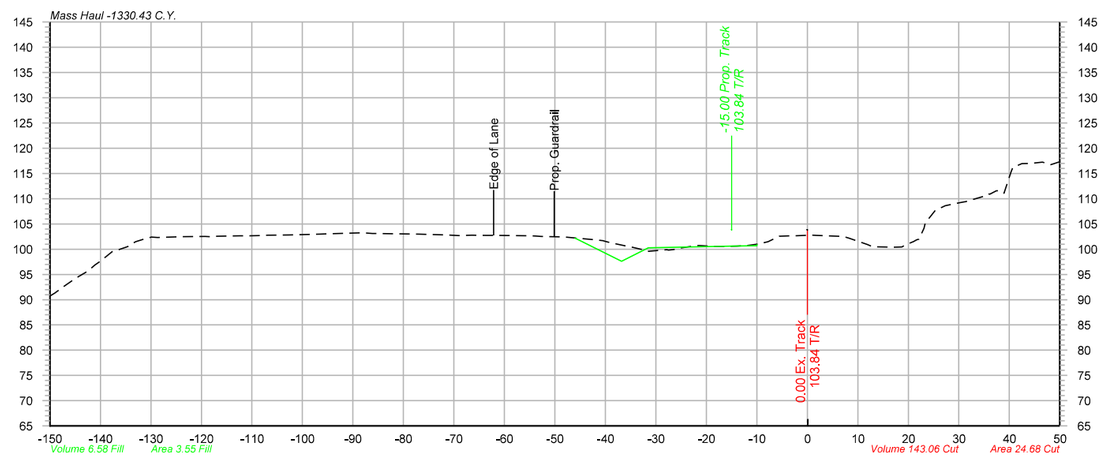
1485+12

-150.00	91.61
-145.57	94.34
-142.55	96.40
-139.50	98.96
-135.00	100.45
-130.14	102.37
-126.49	102.25
-122.49	102.46
-119.30	102.54
-114.72	102.52
-110.97	102.56
-107.73	102.75
-102.48	102.81
-97.80	102.96
-93.86	103.13
-86.40	103.12
-80.48	103.05
-74.91	102.93
-71.07	102.75
-64.56	102.65
-59.01	102.66
-54.44	102.61
-50.72	102.38
-43.84	101.87
-40.65	101.36
-37.34	99.54
-33.47	96.14
-30.17	95.12
-26.31	95.57
-23.09	97.62
-19.26	100.23
-13.75	100.50
-10.49	100.66
-7.21	101.53
-3.41	102.74
1.76	102.81
7.08	102.50
10.73	101.52
13.74	100.49
18.72	100.51
22.03	99.33
26.52	98.12
29.80	97.21
33.53	96.76
36.57	96.52
41.49	99.71
44.79	101.75
48.60	103.28



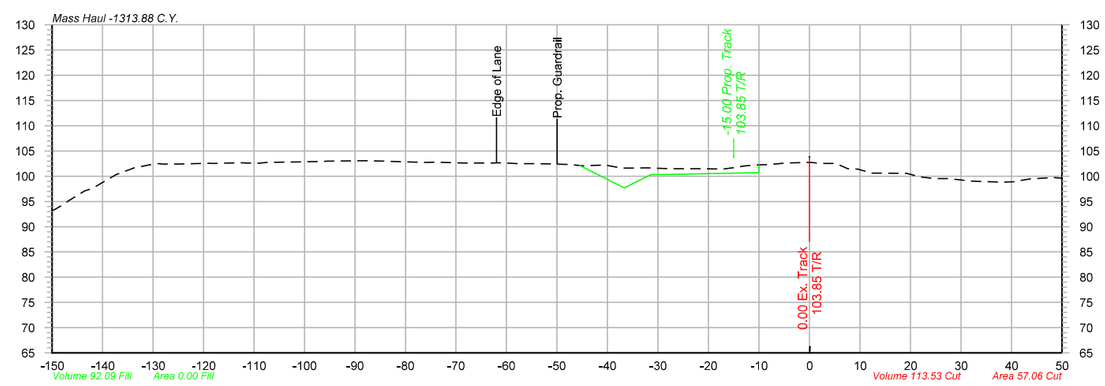
1487+00

-150.00	97.18
-144.03	99.85
-138.20	100.48
-133.58	101.62
-129.93	102.47
-126.83	102.33
-123.70	102.42
-120.32	102.53
-115.84	102.50
-110.41	102.65
-107.35	102.75
-95.48	103.04
-92.42	103.18
-88.42	103.11
-81.27	102.90
-77.93	102.84
-73.77	102.84
-68.73	102.71
-62.66	102.62
-58.62	102.55
-52.19	102.44
-43.89	101.52
-39.43	100.47
-35.20	100.55
-29.21	100.58
-25.53	100.48
-20.91	100.47
-14.30	101.20
-9.14	100.81
-5.45	102.49
1.21	102.71
5.51	102.74
9.79	101.45
16.51	100.60
20.08	100.30
23.19	100.42
26.36	100.42
32.58	100.74
36.44	101.37
40.43	103.99
44.57	105.89
49.32	111.00



1485+00

-150.00	90.74
-144.98	94.18
-141.13	96.85
-137.65	99.51
-134.56	100.52
-129.89	102.41
-123.52	102.47
-119.29	102.51
-112.33	102.67
-108.71	102.70
-102.71	102.80
-96.54	103.00
-88.54	103.23
-85.42	103.11
-77.02	102.97
-71.36	102.80
-66.50	102.77
-62.14	102.74
-58.19	102.68
-54.81	102.66
-48.91	102.44
-42.46	101.91
-39.11	101.31
-35.61	100.56
-31.89	99.72
-27.81	99.90
-23.26	100.51
-18.40	100.51
-13.95	100.60
-9.69	101.03
-6.09	102.30
-2.50	102.67
1.11	102.76
7.11	102.54
11.85	100.95
17.26	100.41
21.08	101.53
25.30	107.67
30.11	109.19
33.56	110.07
37.44	111.57
40.70	116.21
44.29	116.98
48.21	116.75



1486+00

-150.00	93.17
-143.50	97.12
-137.59	100.15
-133.61	101.67
-129.48	102.46
-125.19	102.42
-122.03	102.50
-118.04	102.54
-114.80	102.61
-111.72	102.62
-107.46	102.73
-102.15	102.80
-96.96	102.90
-87.66	103.07
-84.43	102.97
-80.74	102.85
-76.16	102.74
-71.24	102.70
-66.08	102.59
-62.53	102.63
-57.78	102.50
-54.43	102.48
-47.54	102.30
-41.01	102.20
-37.19	101.63
-32.35	101.66
-28.86	101.51
-25.75	101.50
-21.73	101.50
-16.91	101.44
-12.55	102.05
-7.80	102.31
-4.75	102.62
0.07	102.75
5.17	102.54
9.58	101.39
13.13	100.61
19.18	100.56
23.71	99.64
27.41	99.53
30.49	99.18
34.18	98.94
37.98	98.83
41.47	99.10
44.91	99.53
48.21	99.74

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 012 of 139

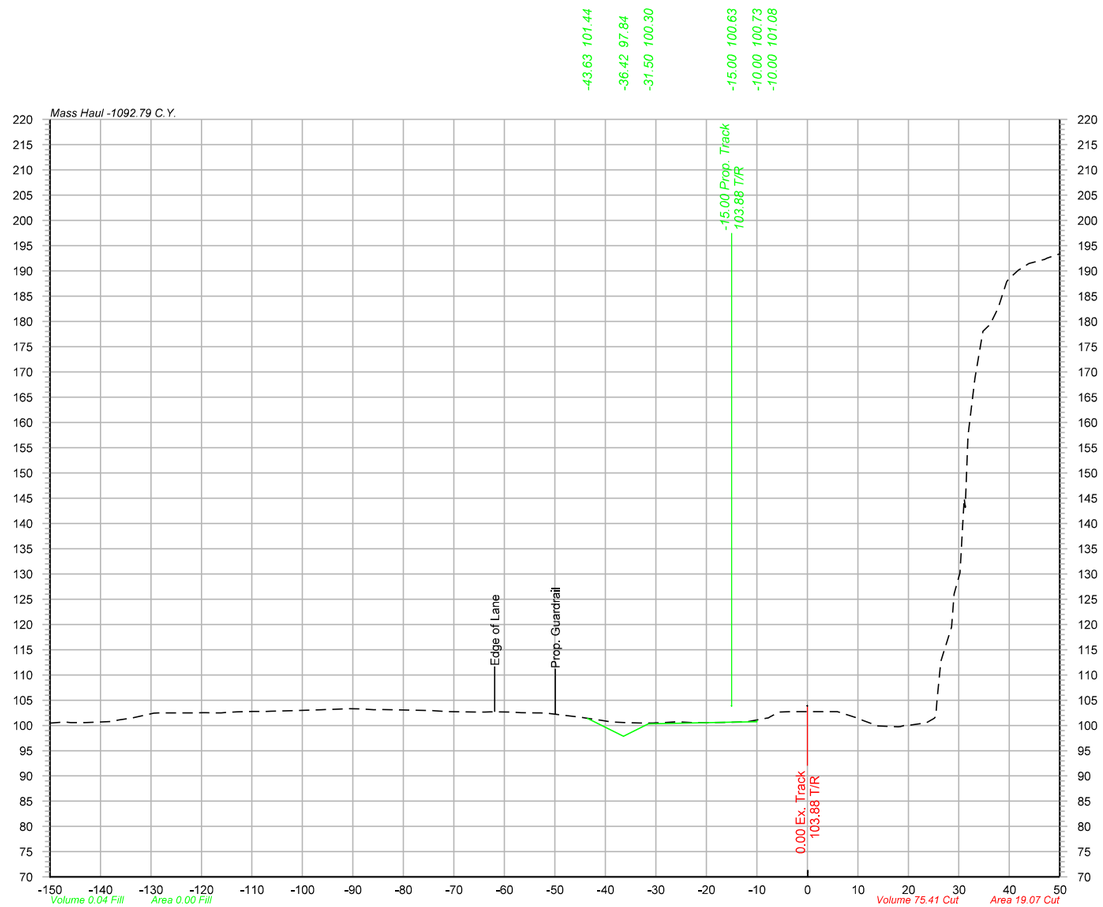
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

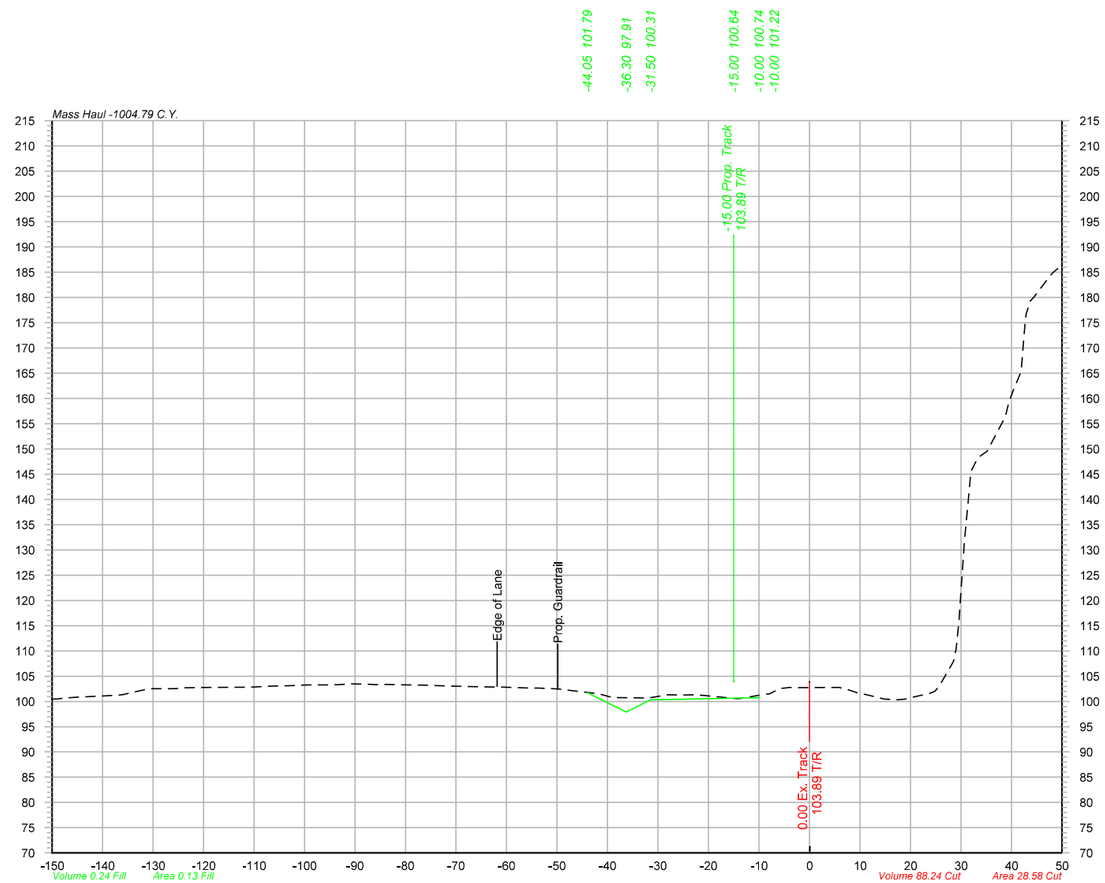
SHEET TITLE:
CROSS SECTIONS STA.1485+00 TO STA.1487+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhe5573\ipgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



1488+00

-150.00	100.49	
-145.90	100.57	
-140.96	100.65	
-136.23	101.11	
-129.42	102.45	
-123.29	102.49	
-119.68	102.51	
-116.11	102.48	
-113.00	102.69	
-109.83	102.77	
-106.28	102.80	
-101.41	102.94	
-96.19	103.12	
-92.87	103.25	
-88.49	103.27	
-84.45	103.17	
-74.24	102.93	
-70.77	102.74	
-65.36	102.65	
-61.91	102.71	
-58.82	102.64	
-53.70	102.50	
-45.85	101.73	
-40.89	101.01	
-36.06	100.58	
-30.55	100.50	
-25.81	100.72	
-22.81	100.58	
-16.12	100.62	
-12.26	100.69	
-8.05	101.42	
-3.31	102.74	
-0.21	102.74	
5.04	102.74	
9.87	101.49	
13.97	99.92	
17.97	99.75	
23.55	100.54	
26.90	114.19	
30.22	130.25	
34.79	178.04	
39.49	187.88	
43.60	191.30	
47.02	192.32	



1489+00

-150.00	100.44	
-145.58	100.82	
-136.92	101.24	
-130.97	102.49	
-126.23	102.54	
-121.95	102.74	
-112.67	102.80	
-107.55	102.97	
-103.33	103.13	
-99.26	103.26	
-95.50	103.28	
-90.89	103.48	
-87.25	103.40	
-84.21	103.35	
-74.78	103.19	
-70.53	103.04	
-66.84	102.94	
-62.96	102.87	
-55.32	102.65	
-52.01	102.58	
-43.85	101.76	
-39.82	101.00	
-35.05	100.72	
-31.59	100.74	
-28.07	101.31	
-24.75	101.27	
-14.40	100.57	
-8.75	101.44	
-4.48	102.68	
5.65	102.79	
9.78	101.59	
14.74	100.49	
18.68	100.45	
23.84	101.61	
28.50	107.90	
31.96	145.52	
35.04	149.43	
38.32	155.47	
41.54	164.46	
47.61	184.22	

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

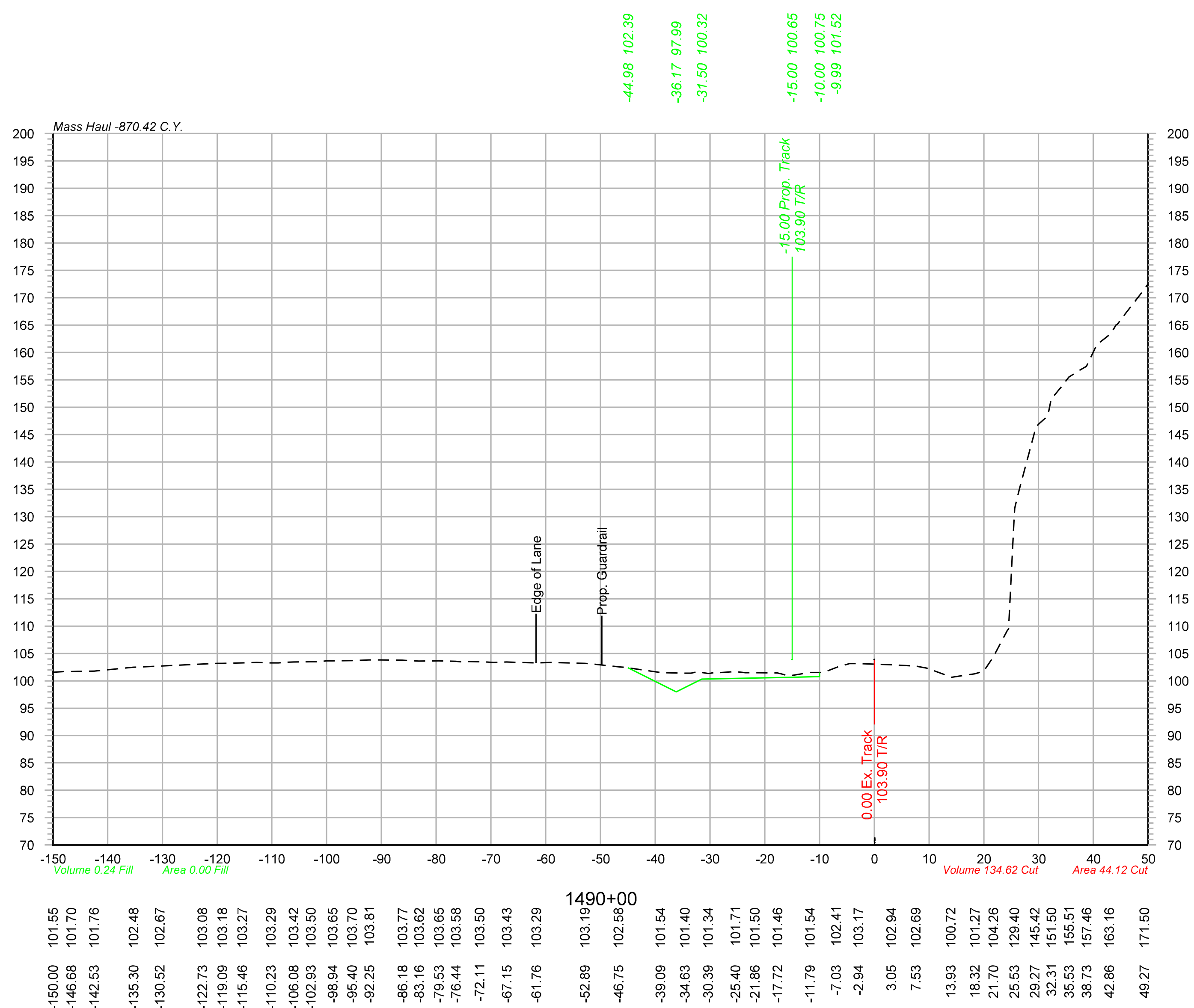
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 013 of 139

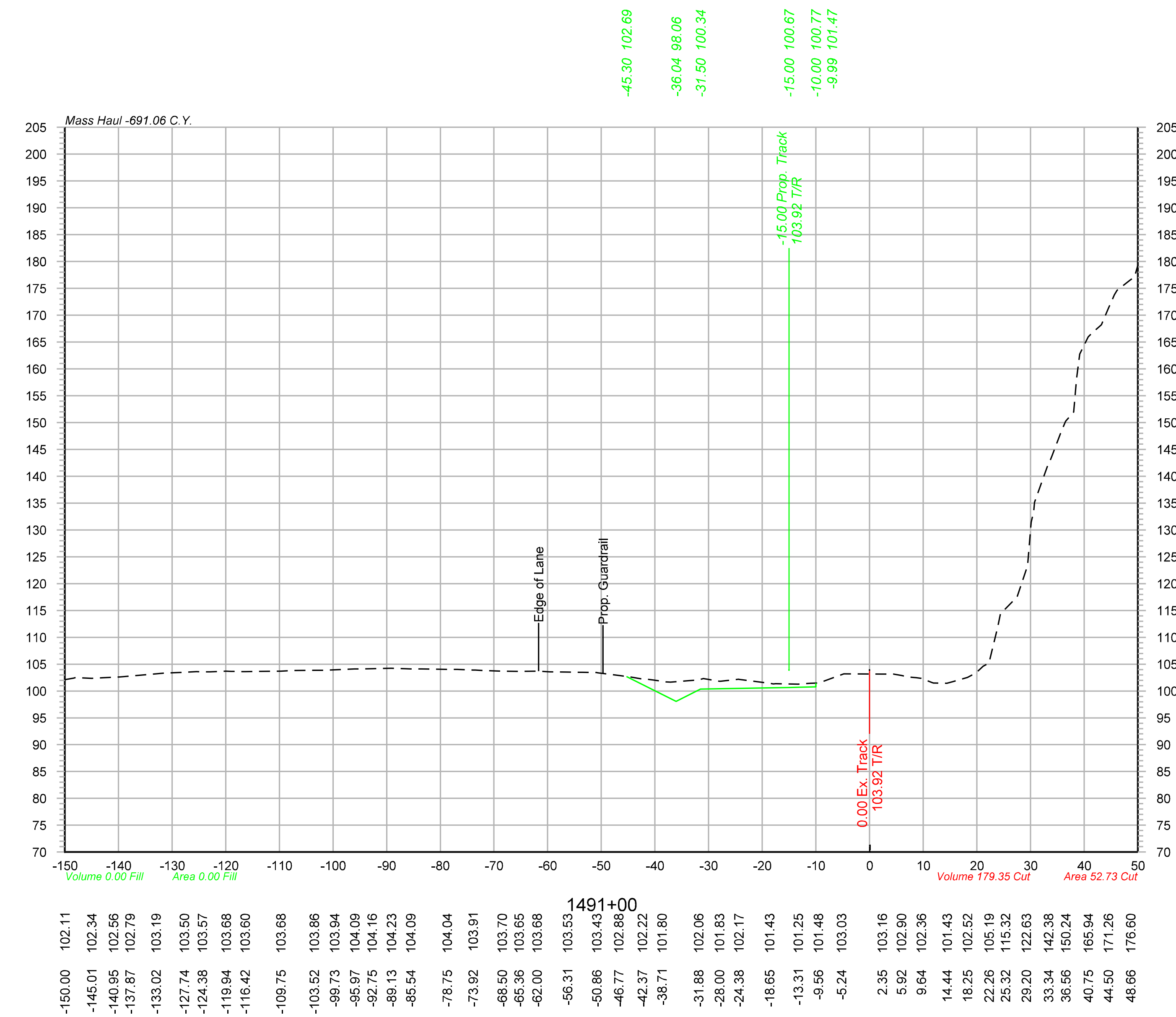
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1488+00 TO STA.1489+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\upprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





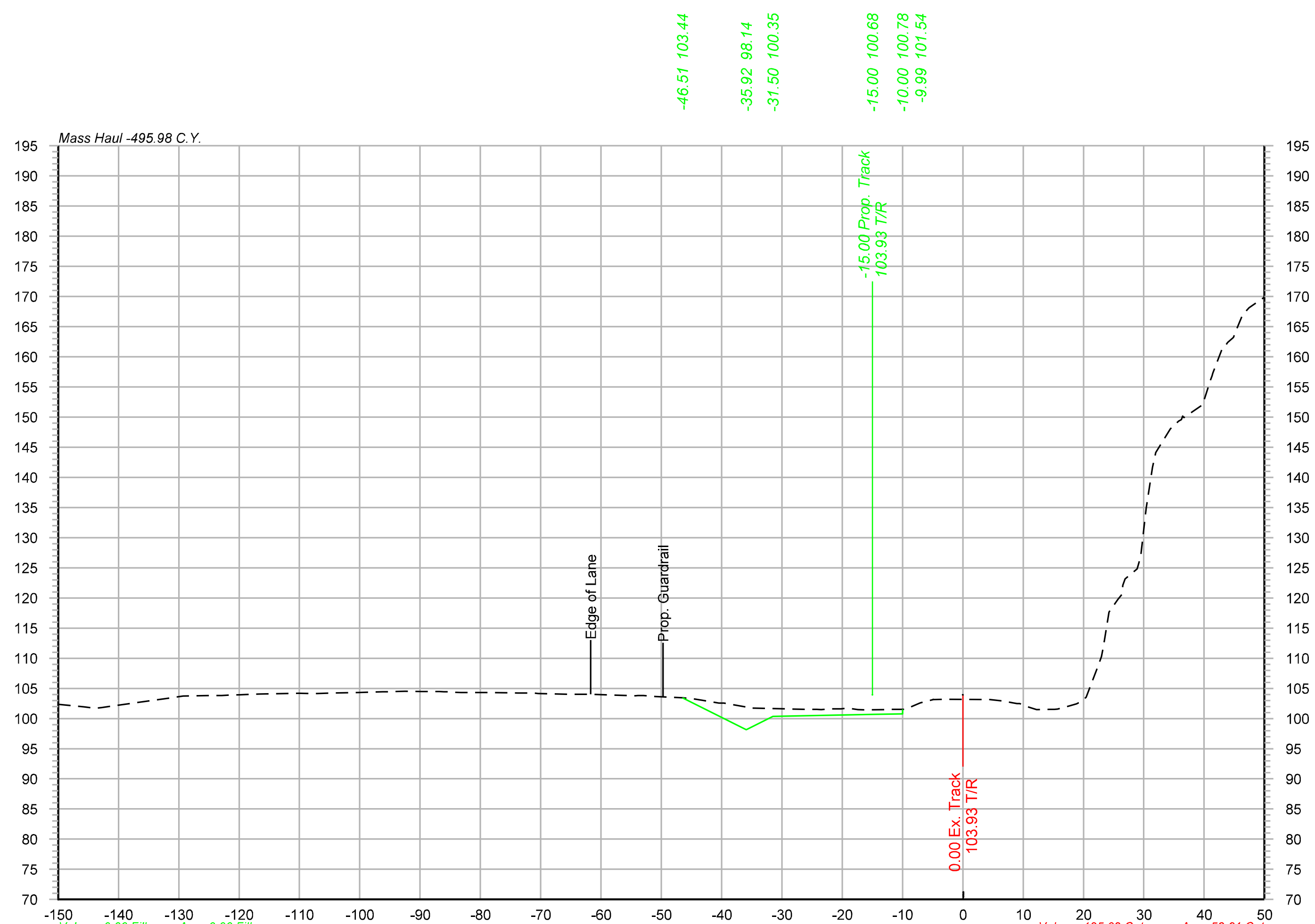
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 014 of 139	SHEET TITLE: CROSS SECTIONS STA.1490+00 TO STA.1491+00

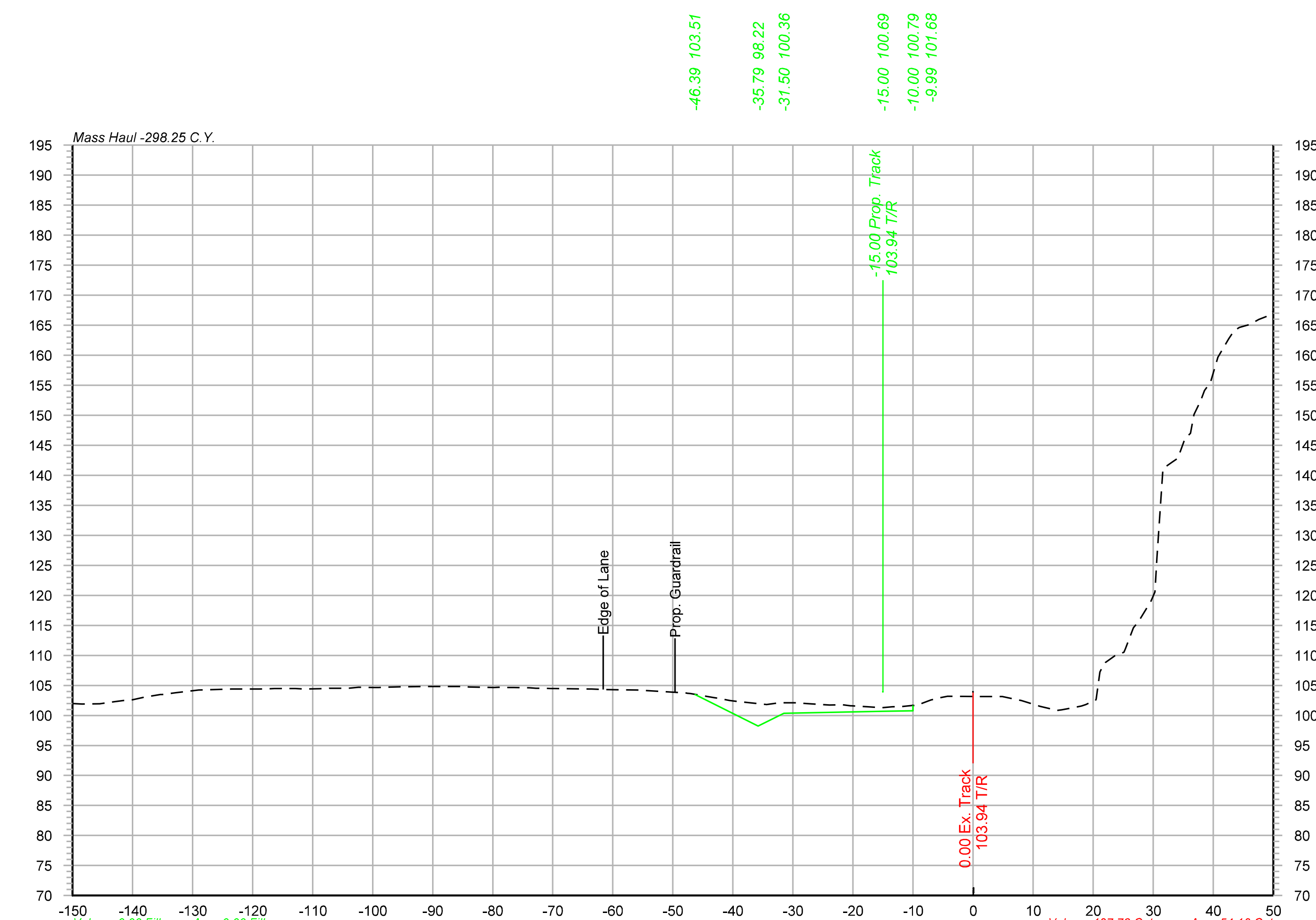
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



1492+00

102.34	-150.00
101.92	-145.74
101.97	-141.72
102.49	-138.10
103.49	-130.91
103.81	-124.81
103.88	-121.51
104.06	-116.66
104.17	-110.07
104.17	-107.05
104.32	-100.21
104.42	-96.17
104.52	-92.50
104.48	-86.80
104.31	-83.24
104.34	-79.11
104.28	-75.60
104.23	-71.13
104.03	-65.40
104.01	-61.69
103.90	-58.24
103.77	-54.30
103.65	-50.95
103.43	-46.37
103.01	-43.17
102.55	-39.64
101.79	-35.16
101.59	-29.26
101.54	-26.11
101.60	-21.95
101.46	-17.41
101.48	-12.82
101.54	-9.58
103.16	-4.92
103.17	4.47
102.63	8.27
101.49	12.23
101.55	15.69
102.45	18.86
108.67	22.41
119.74	25.67
124.82	28.91
144.14	31.97
149.32	35.77
151.85	39.43
161.41	43.04
166.91	46.35
169.88	50.00



1493+00

102.00	-150.00
101.96	-145.48
102.53	-141.23
103.03	-138.13
103.50	-135.02
104.24	-129.01
104.36	-124.80
104.38	-118.93
104.47	-115.49
104.41	-111.41
104.50	-107.41
104.51	-104.30
104.64	-99.88
104.79	-95.10
104.80	-91.47
104.81	-85.95
104.66	-79.81
104.64	-76.51
104.54	-72.79
104.48	-69.69
104.40	-63.94
104.29	-59.19
104.24	-55.93
103.79	-48.34
102.97	-43.26
102.35	-39.52
101.81	-34.38
102.12	-29.67
101.72	-23.92
101.62	-20.41
101.30	-15.68
101.50	-11.85
102.55	-7.02
103.16	1.18
103.13	4.88
102.50	8.04
101.52	11.13
100.95	14.79
101.56	18.05
107.24	21.13
110.51	25.12
119.05	29.62
142.18	33.17
146.99	36.22
155.50	39.56
162.75	42.59
165.11	46.10
166.53	49.12

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

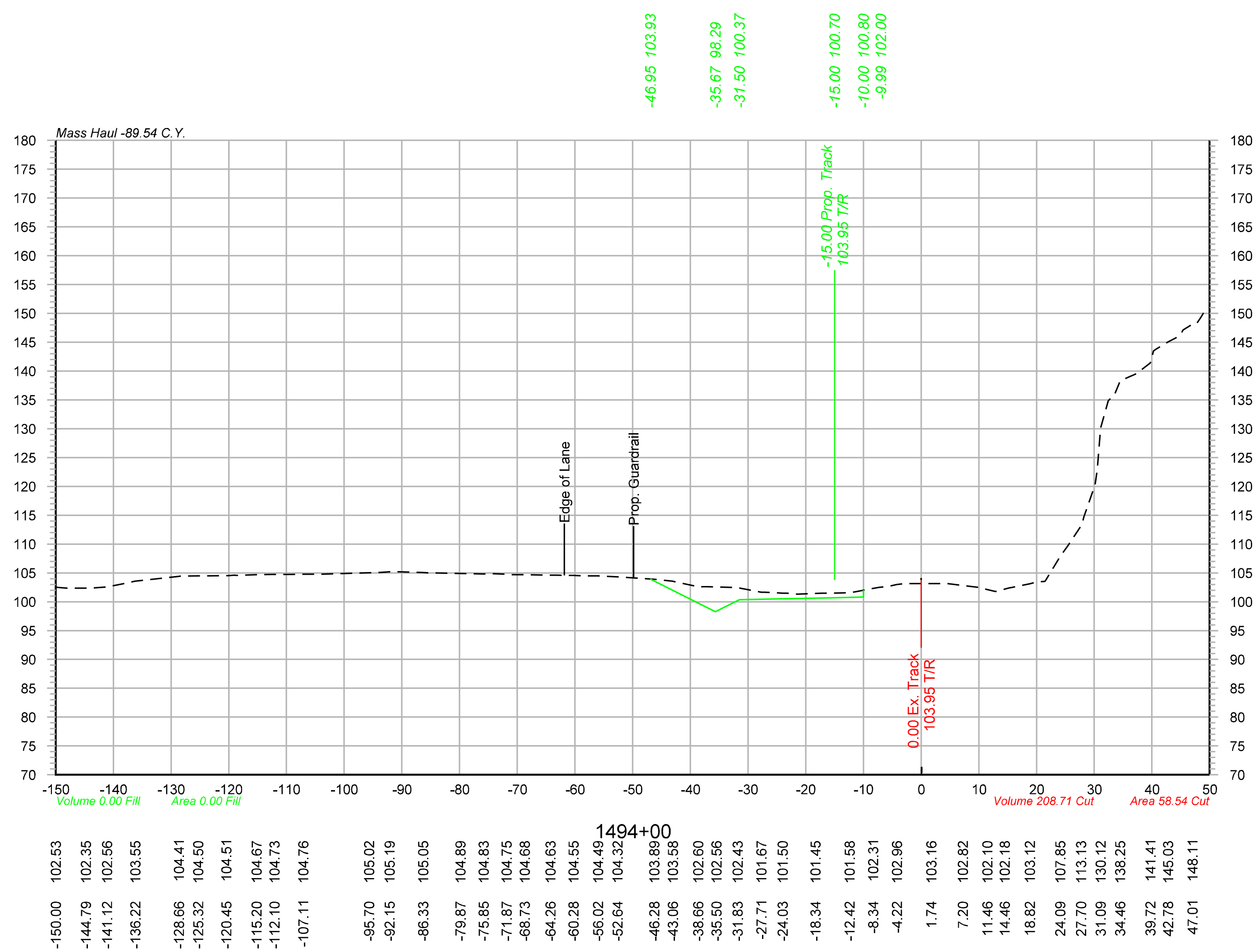
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 015 of 139

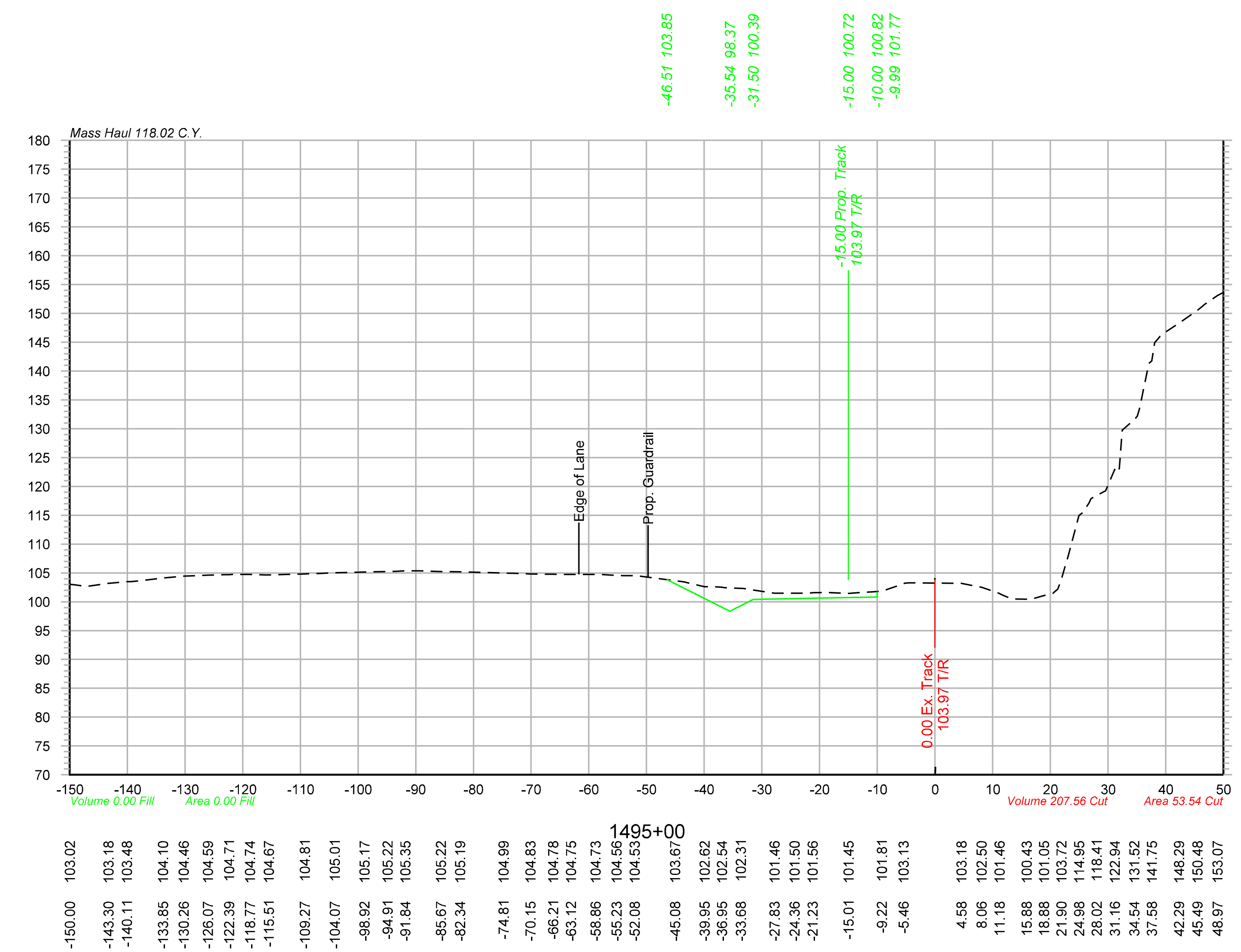
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1492+00 TO STA.1493+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

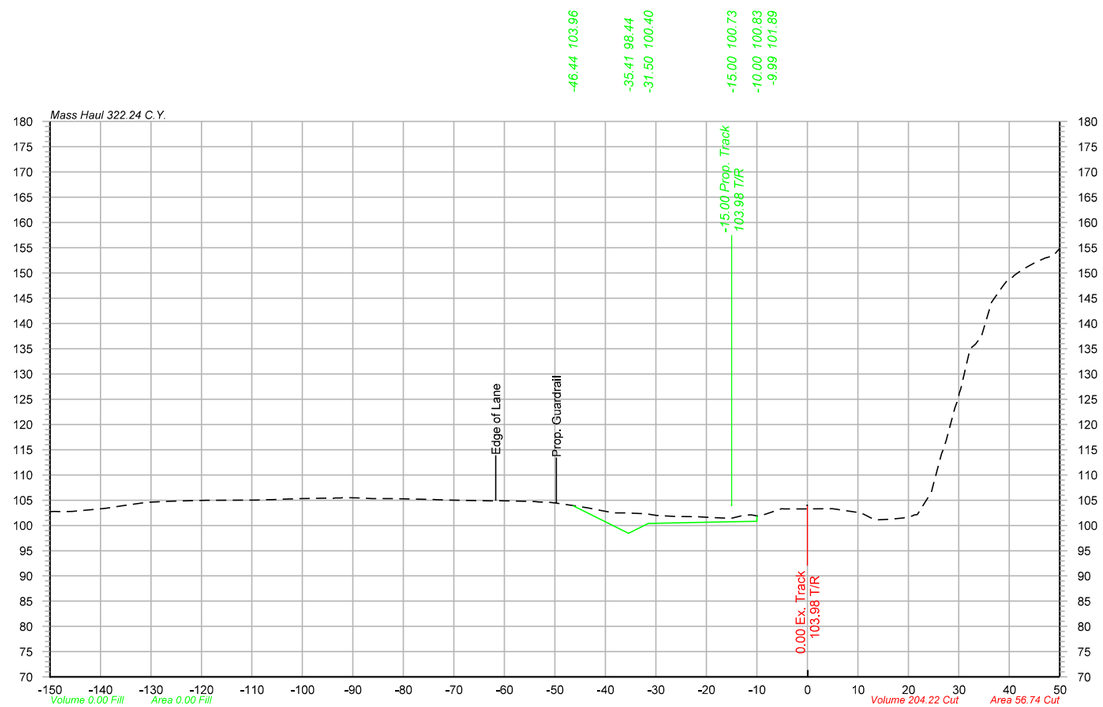
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 016 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

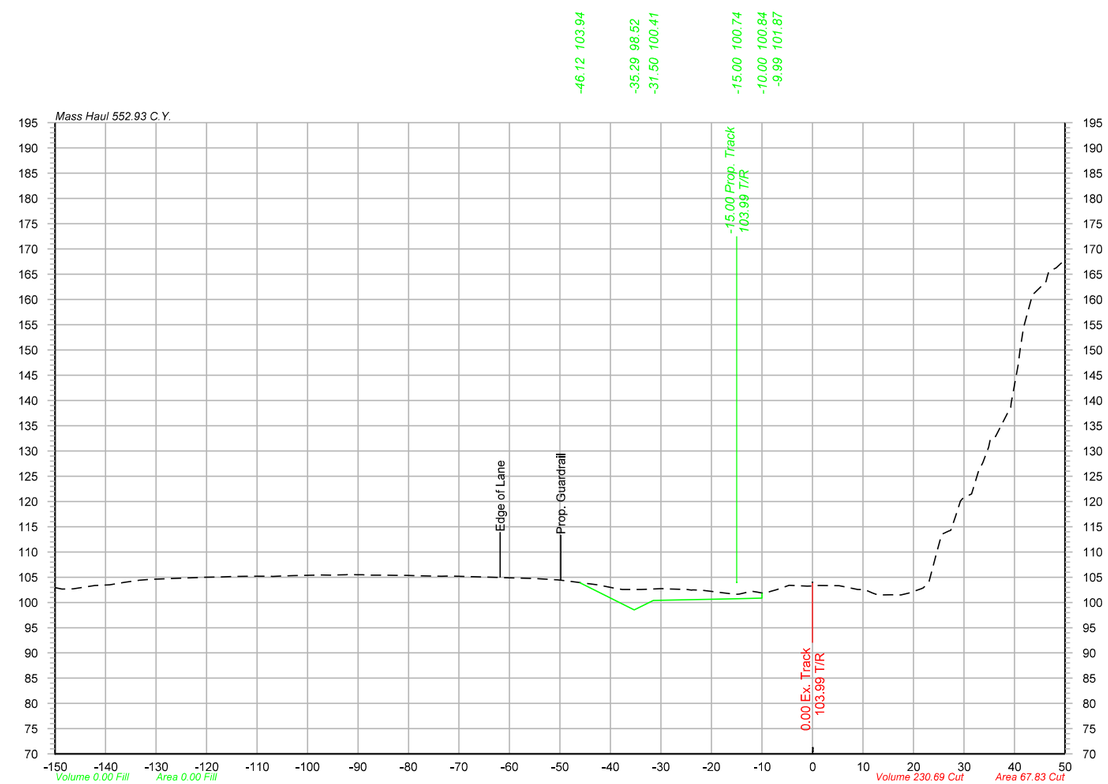
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1494+00 TO STA.1495+00



1496+00

-150.00	102.72
-145.65	102.79
-141.95	103.11
-138.32	103.50
-131.54	104.50
-126.62	104.77
-122.26	104.88
-118.99	104.97
-109.04	105.03
-106.04	105.12
-100.42	105.30
-95.31	105.38
-92.22	105.47
-88.61	105.46
-85.59	105.30
-81.84	105.25
-78.36	105.25
-74.26	105.15
-70.97	105.04
-62.23	104.87
-59.13	104.85
-53.91	104.74
-49.83	104.45
-45.31	103.79
-40.76	102.93
-37.74	102.48
-31.98	102.34
-28.29	101.91
-21.70	101.73
-17.05	101.49
-12.91	101.92
-9.58	101.82
-5.07	103.33
-0.70	103.29
4.96	103.30
8.92	102.74
13.00	101.29
16.44	101.23
20.85	101.92
24.47	106.43
27.47	116.78
32.22	135.00
36.49	144.19
40.07	148.89
44.97	152.00
48.74	153.46



1497+00

-150.00	102.92
-146.42	102.68
-142.40	103.33
-139.29	103.47
-136.23	104.00
-131.76	104.51
-127.94	104.67
-123.67	104.86
-118.49	105.01
-114.53	105.13
-111.24	105.18
-107.30	105.17
-102.74	105.31
-98.58	105.40
-95.38	105.42
-92.32	105.50
-89.07	105.48
-85.68	105.39
-82.25	105.36
-77.74	105.29
-73.59	105.20
-63.09	104.97
-54.86	104.72
-51.50	104.53
-42.53	103.50
-37.67	102.59
-33.95	102.58
-29.91	102.72
-24.84	102.57
-21.71	102.39
-16.96	101.82
-13.81	101.81
-9.44	101.76
-6.34	102.78
-1.05	103.25
5.30	103.33
8.95	102.58
12.86	101.50
17.53	101.50
20.89	102.50
24.71	110.31
28.33	117.07
31.49	121.50
34.90	130.73
38.72	137.66
41.83	154.46
45.86	163.13
50.00	167.89

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

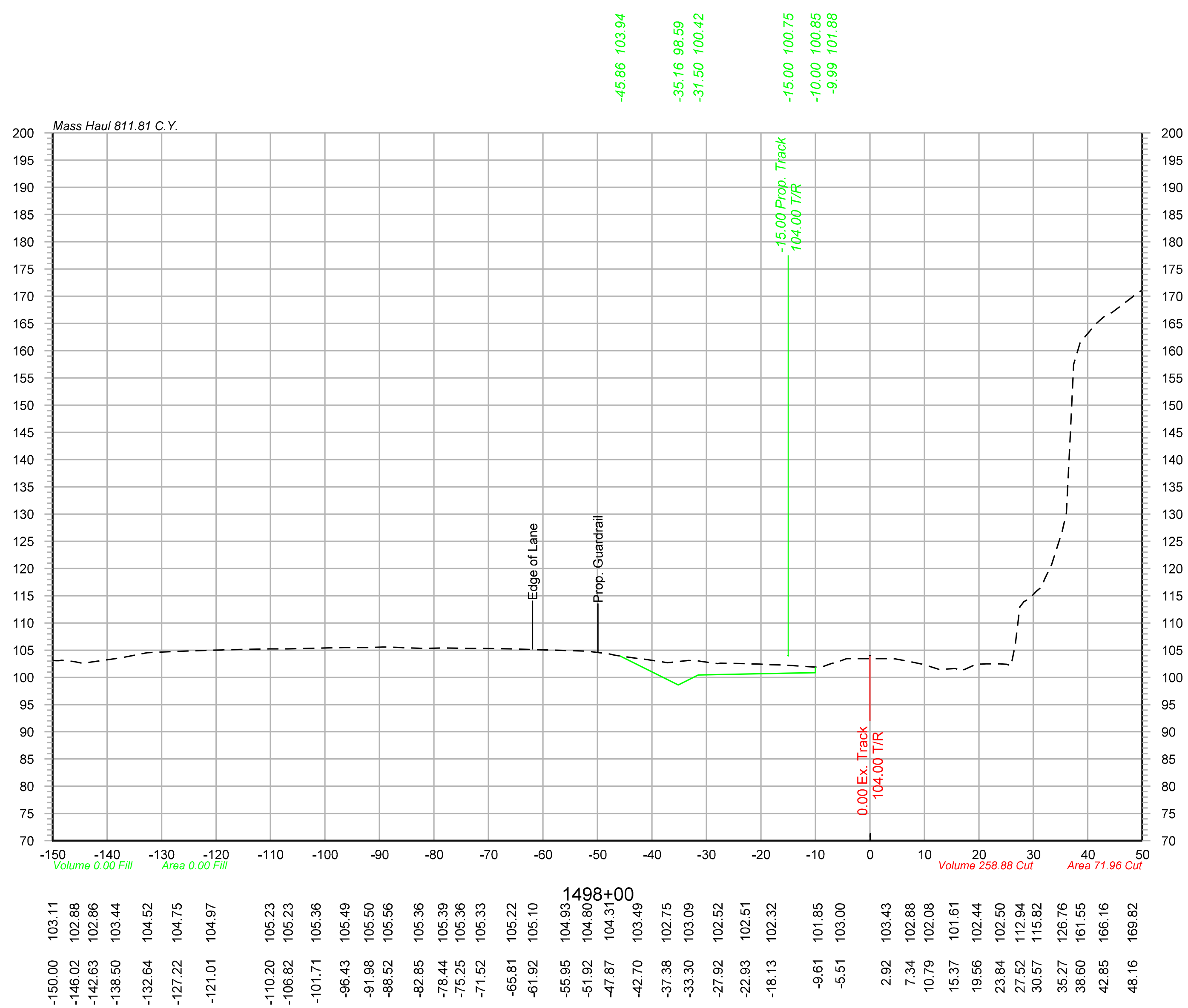
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 017 of 139

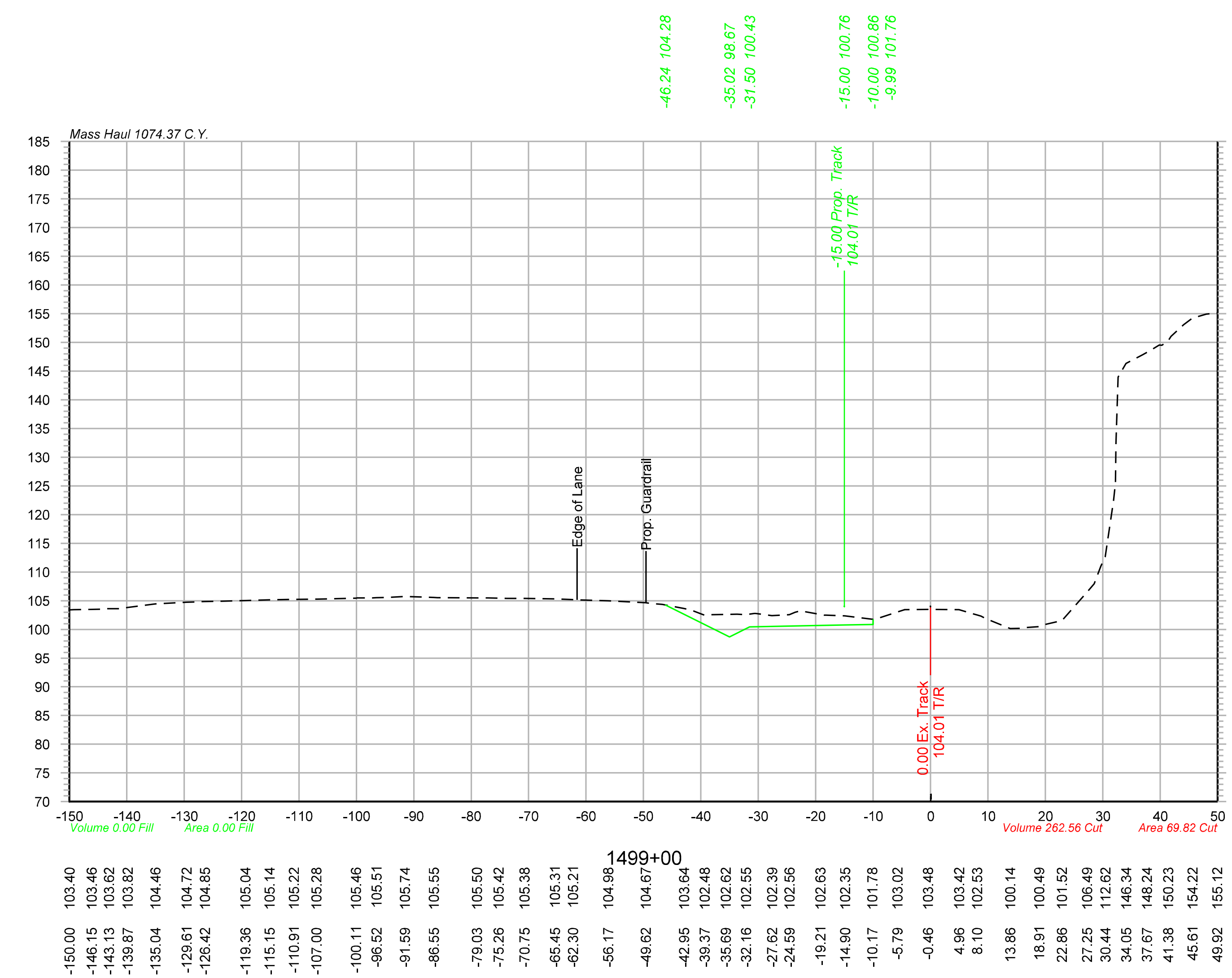
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1496+00 TO STA.1497+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\upprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

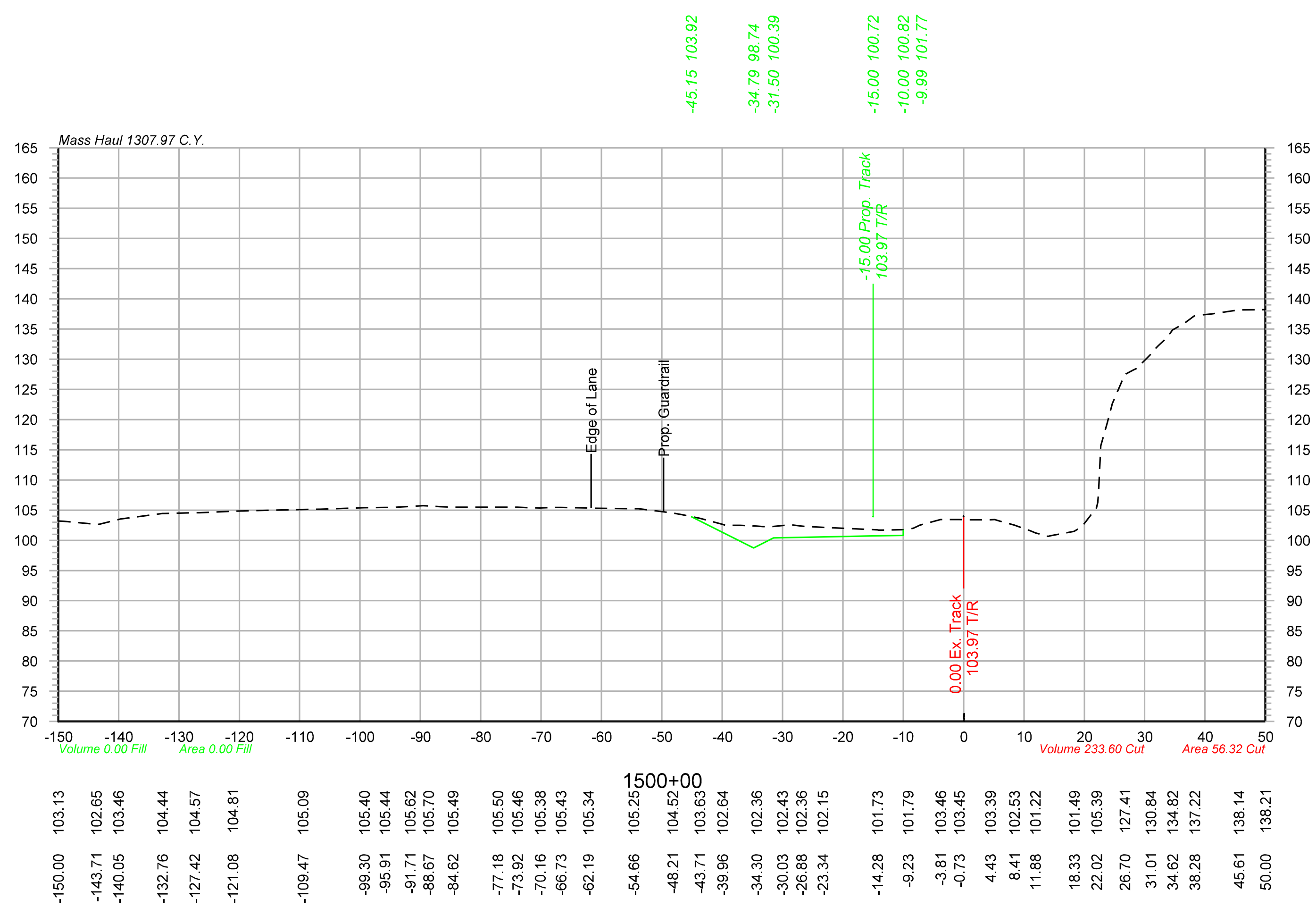
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 018 of 139

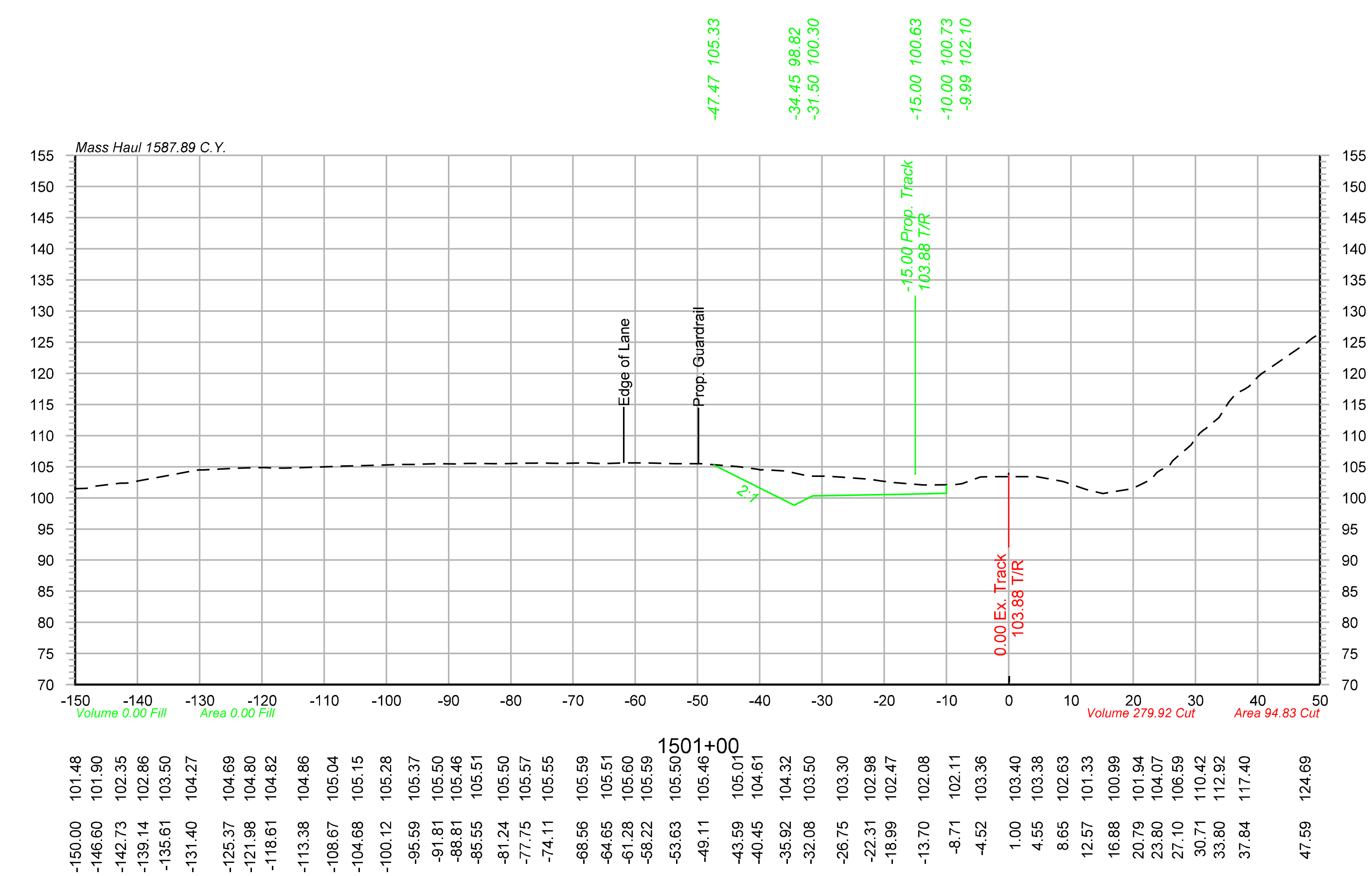
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1498+00 TO STA.1499+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 019 of 139

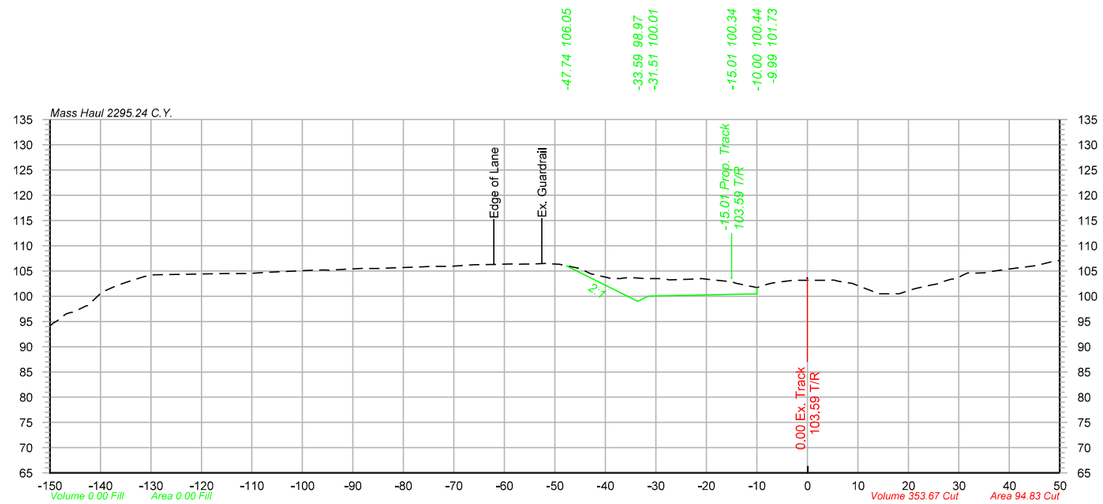
UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

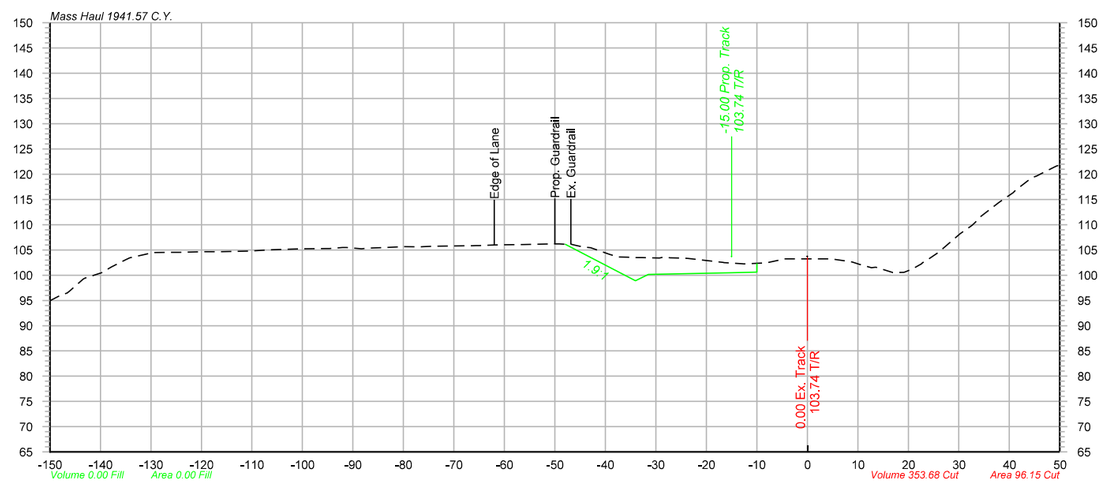
SHEET TITLE:
CROSS SECTIONS STA.1500+00 TO STA.1501+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



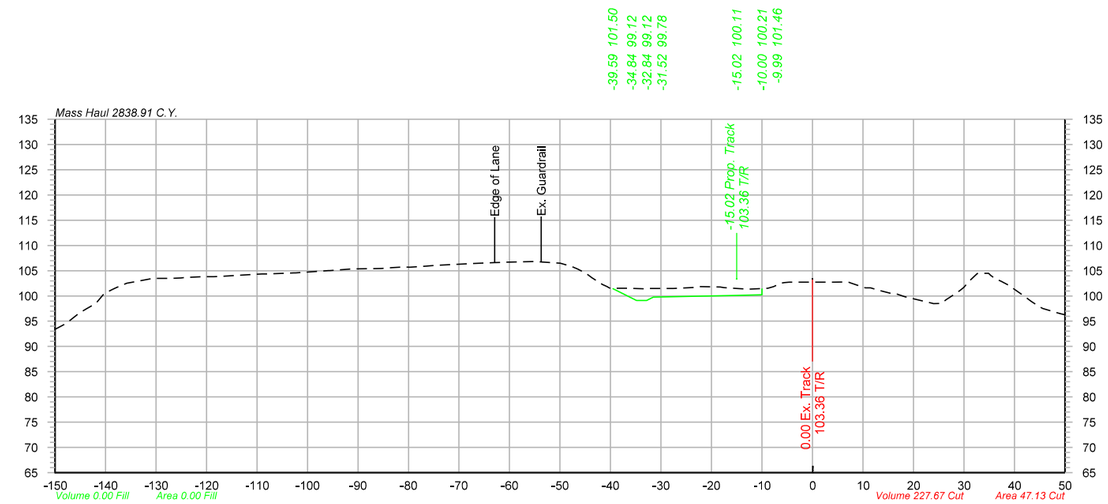
1503+00

-150.00	94.17
-146.83	96.47
-142.87	98.07
-139.75	100.80
-134.82	102.79
-131.26	103.90
-127.04	104.28
-121.69	104.37
-115.43	104.50
-110.90	104.49
-107.11	104.75
-101.32	104.99
-97.85	105.14
-94.74	105.17
-87.64	105.51
-80.98	105.65
-74.39	105.92
-70.21	105.96
-65.89	106.23
-62.65	106.28
-57.82	106.41
-51.89	106.50
-46.47	105.79
-42.99	104.50
-39.12	103.55
-34.90	103.73
-28.84	103.50
-23.25	103.37
-19.93	103.35
-14.99	102.85
-11.41	101.97
-7.66	102.43
-2.77	103.14
3.84	103.17
8.92	102.52
12.83	101.04
18.03	100.50
21.26	101.50
25.73	102.46
29.65	103.50
33.31	104.56
36.98	104.97
41.11	105.54
45.34	106.06
48.53	106.84



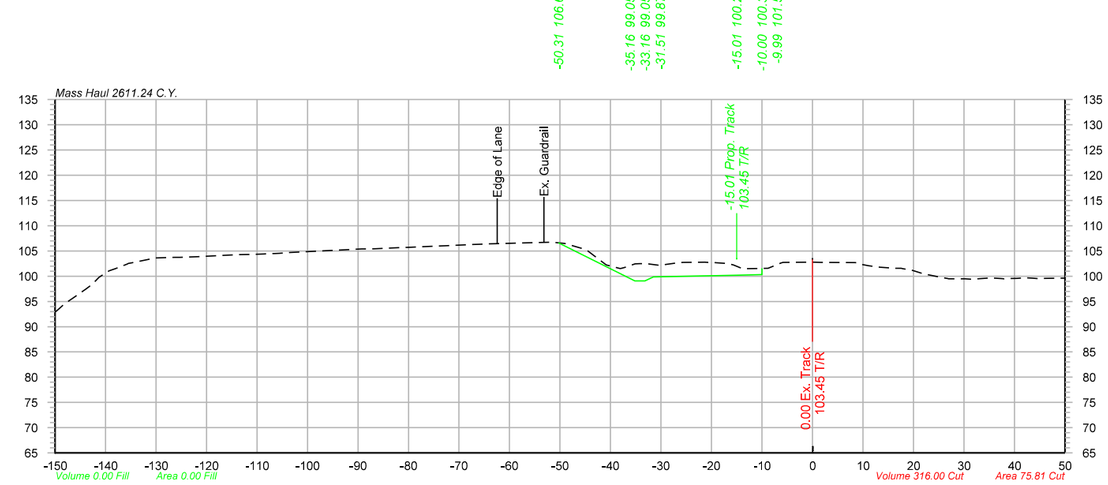
1502+00

-150.00	94.95
-146.57	96.49
-143.42	99.25
-139.79	100.47
-136.23	102.46
-131.55	104.05
-126.28	104.52
-119.55	104.66
-116.29	104.65
-110.40	104.76
-107.15	104.97
-103.79	105.10
-99.50	105.23
-95.43	105.28
-92.07	105.47
-88.36	105.24
-83.41	105.50
-79.81	105.65
-76.71	105.62
-67.97	105.82
-61.99	105.97
-56.31	106.07
-50.67	106.18
-46.89	106.13
-42.90	105.43
-39.14	104.12
-35.62	103.55
-29.27	103.40
-25.57	103.41
-16.61	102.51
-12.97	102.27
-8.10	102.42
-4.67	103.23
4.44	103.25
7.90	102.77
12.70	101.48
16.93	100.53
20.73	101.19
25.85	104.44
30.24	108.20
34.13	111.41
37.79	114.29
41.22	116.82
44.36	119.22
49.23	121.58



1505+00

-150.00	93.43
-145.39	96.50
-141.90	98.53
-138.49	101.34
-133.71	102.88
-130.61	103.49
-126.93	103.50
-120.78	103.82
-117.51	103.87
-110.61	104.28
-104.72	104.49
-97.56	104.90
-91.14	105.35
-87.95	105.38
-83.28	105.60
-79.75	105.71
-76.56	105.92
-70.27	106.29
-62.94	106.61
-55.13	106.81
-49.91	106.49
-46.57	105.37
-41.60	102.27
-36.61	101.51
-32.70	101.41
-28.89	101.50
-23.23	101.69
-18.23	101.77
-15.00	101.50
-8.84	101.51
-5.56	102.63
-2.37	102.72
4.20	102.75
7.57	102.58
11.50	101.63
15.79	100.44
19.84	99.50
23.83	98.51
28.20	100.40
32.65	104.42
36.22	103.40
41.99	99.93
45.62	97.51
48.67	96.61



1504+00

-150.00	92.99
-146.28	95.76
-142.59	98.44
-139.31	101.08
-135.73	102.39
-130.53	103.52
-126.43	103.74
-121.84	103.88
-117.77	104.08
-113.39	104.29
-108.63	104.41
-105.61	104.52
-100.06	104.87
-95.16	105.09
-89.24	105.41
-81.91	105.63
-76.83	105.85
-72.73	106.03
-69.04	106.21
-66.03	106.34
-62.42	106.46
-58.05	106.55
-51.62	106.75
-45.47	105.45
-41.89	103.01
-38.14	101.52
-35.12	102.44
-30.28	102.14
-26.98	102.66
-21.29	102.76
-17.04	102.53
-13.82	101.50
-10.75	101.54
-7.44	102.10
-0.76	102.76
8.51	102.69
13.39	101.79
16.39	101.56
19.66	101.18
22.98	100.28
26.86	99.50
30.20	99.50
34.60	99.63
37.93	99.50
42.15	99.69
46.07	99.57
49.14	99.61

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

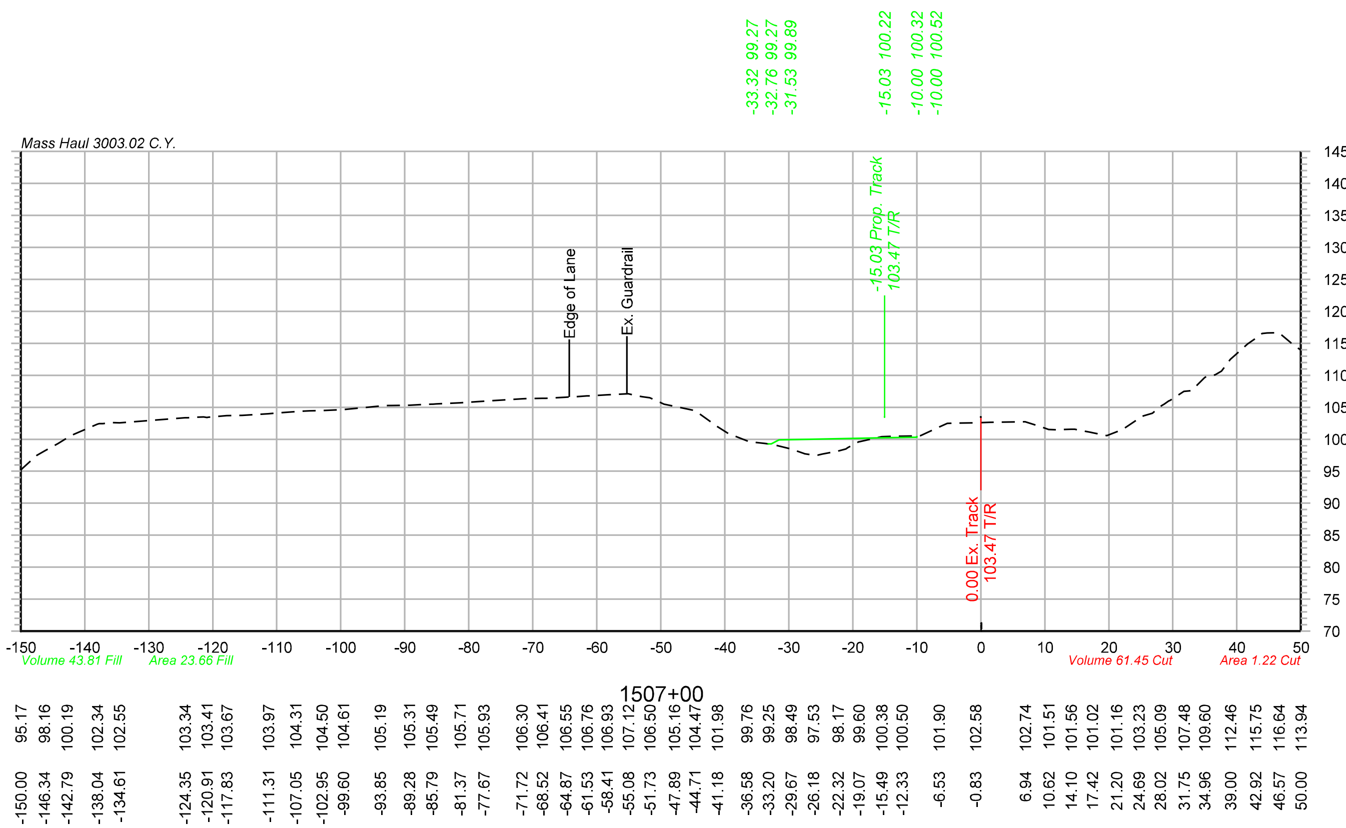
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 020 of 139

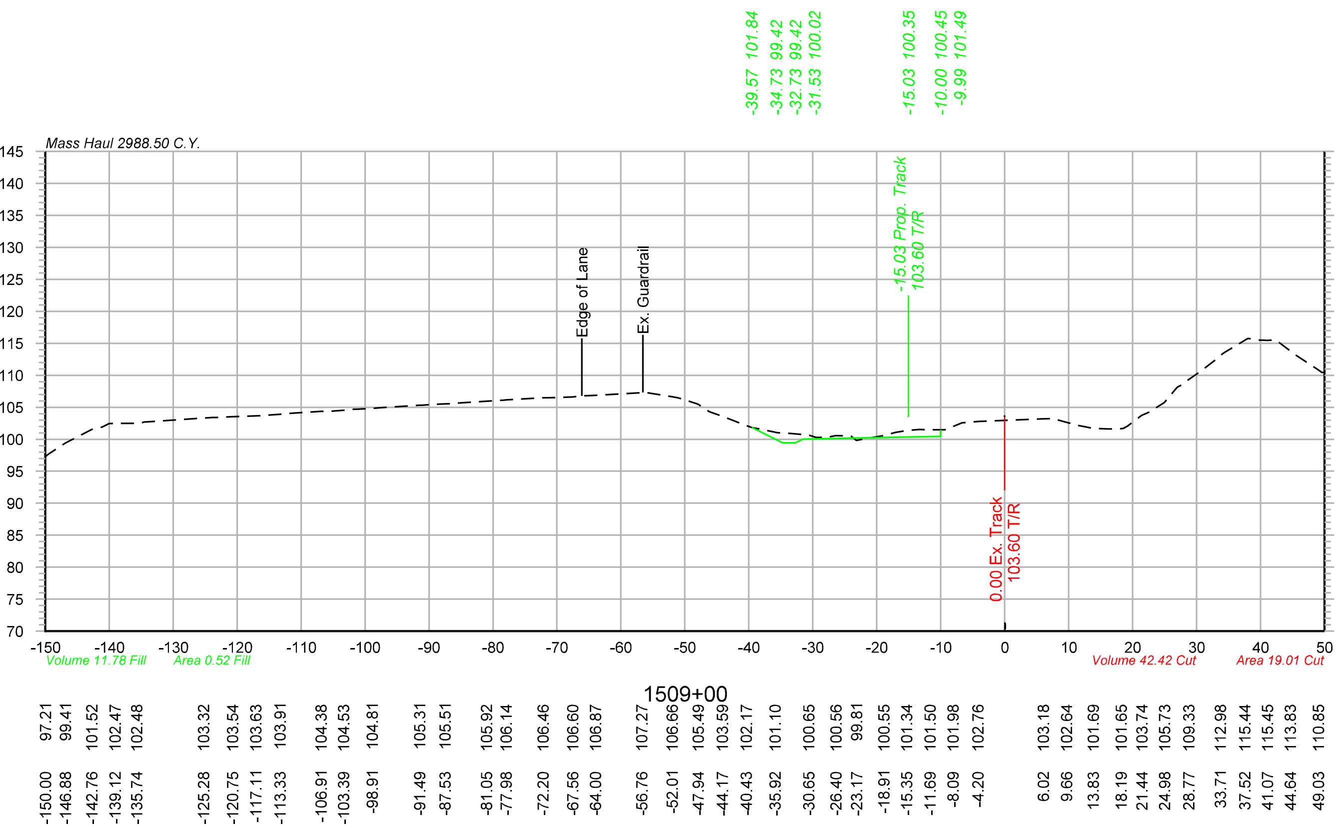
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

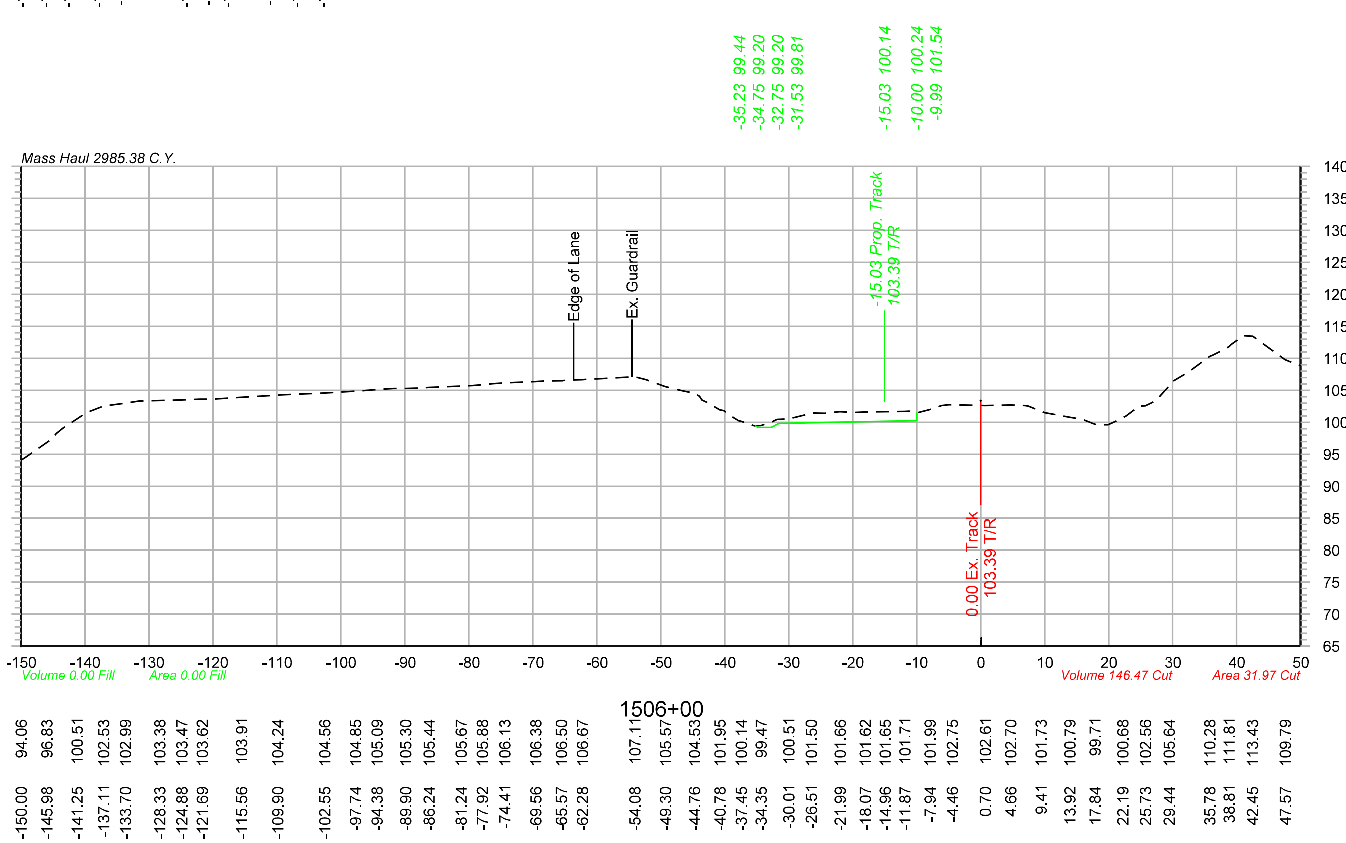
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

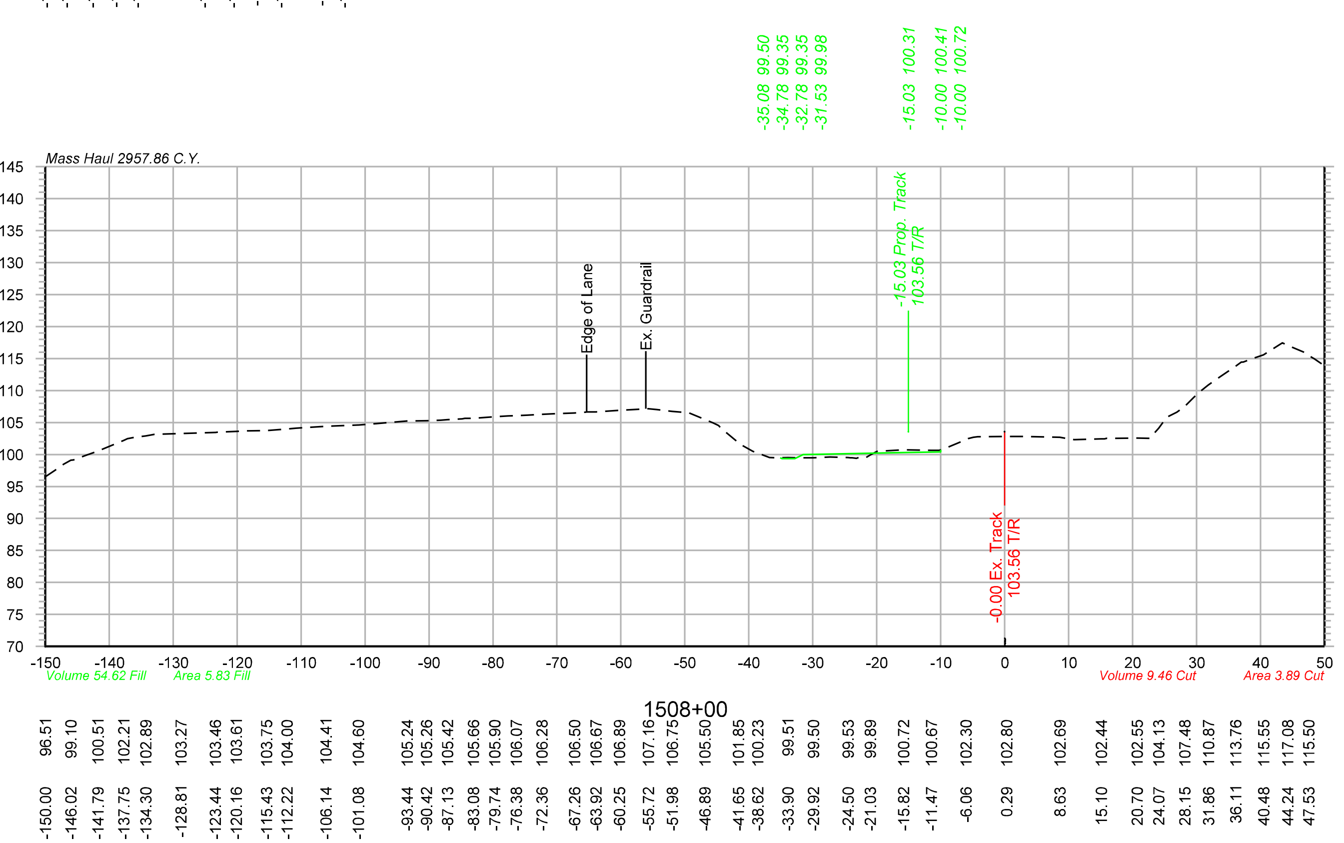
SHEET TITLE:
CROSS SECTIONS STA.1502+00 TO STA.1505+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55773\ipsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i.Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-X5.dgn
Default
10/20/2014









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

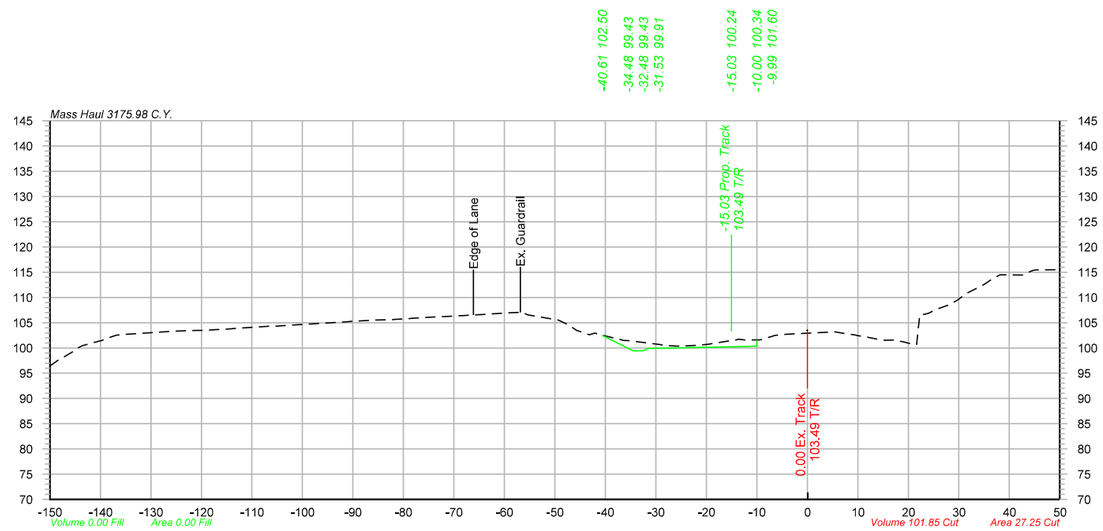
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 021 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

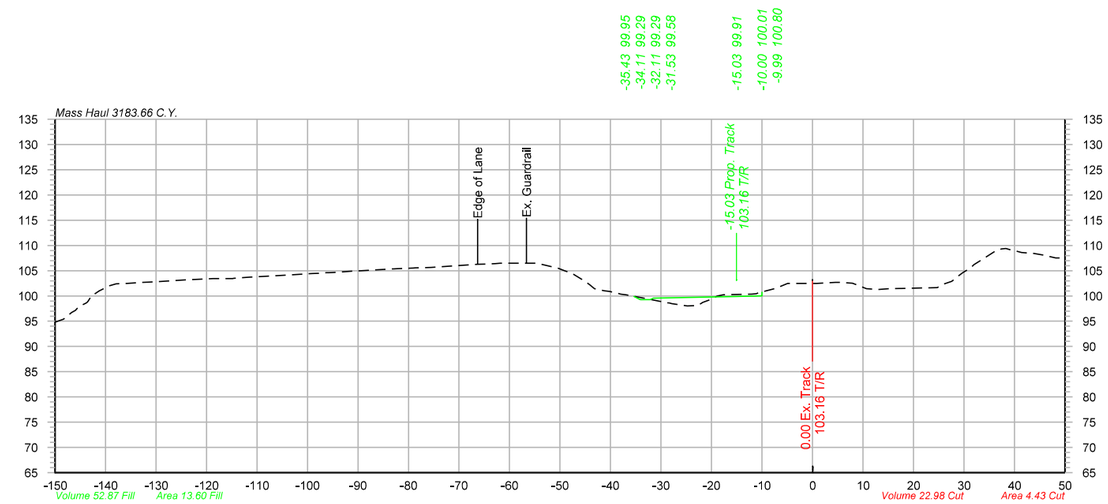
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1506+00 TO STA.1509+00



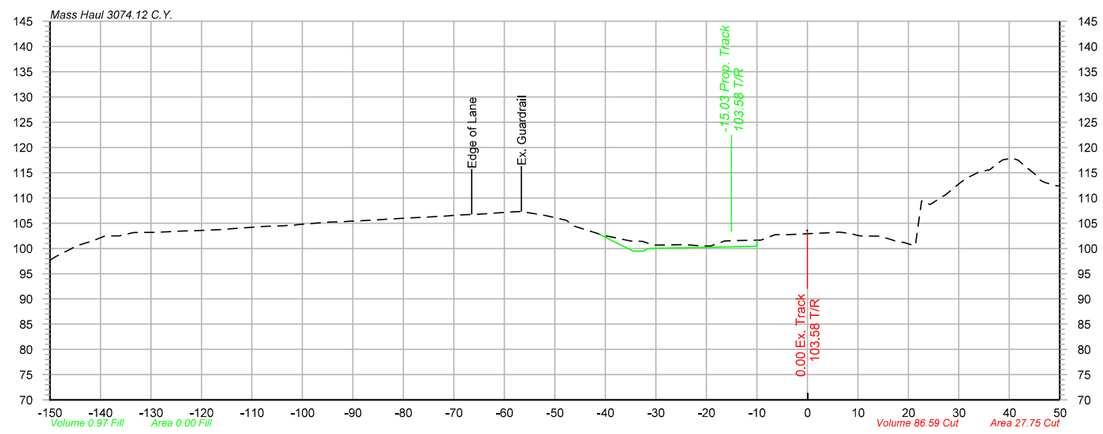
1511+00

-150.00	96.43
-145.02	99.51
-141.19	101.12
-137.75	102.23
-127.43	103.18
-124.29	103.36
-120.01	103.50
-116.89	103.67
-112.52	103.92
-106.94	104.29
-102.86	104.50
-99.27	104.71
-95.87	104.91
-91.12	105.20
-86.27	105.49
-82.13	105.60
-78.73	105.83
-74.46	106.11
-70.65	106.29
-66.11	106.53
-62.75	106.71
-58.57	106.99
-55.33	106.54
-49.34	105.51
-45.72	103.48
-42.09	102.93
-36.60	101.55
-29.27	100.68
-25.69	100.36
-21.72	100.53
-14.97	101.49
-9.30	101.61
-4.44	102.67
3.81	103.11
7.39	102.87
11.14	102.29
14.99	101.54
18.76	101.26
21.92	103.57
25.42	107.60
29.82	109.51
34.97	112.57
38.16	114.48
41.52	114.44
44.57	115.33
49.04	115.47



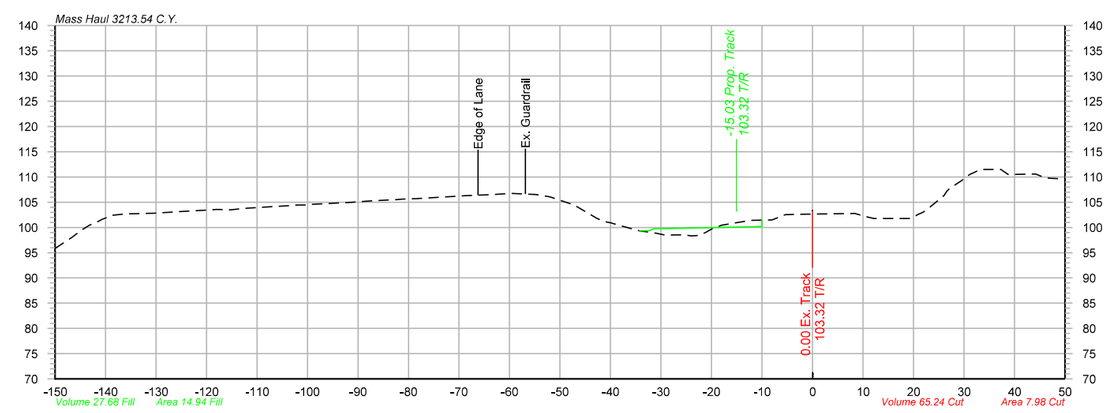
1513+00

-150.00	94.81
-146.69	96.73
-143.49	98.90
-139.21	102.04
-135.74	102.50
-132.68	102.88
-129.24	103.18
-124.09	103.44
-118.76	103.44
-115.21	103.44
-111.31	103.75
-105.23	104.08
-101.07	104.33
-97.81	104.49
-91.30	104.88
-83.13	105.37
-79.06	105.53
-75.53	105.64
-71.87	105.89
-66.30	106.26
-62.84	106.40
-58.72	106.50
-54.67	106.50
-50.34	105.50
-44.96	102.87
-41.23	101.03
-37.96	100.37
-32.98	99.50
-28.77	98.64
-24.79	98.03
-21.71	98.73
-17.68	100.24
-12.05	100.37
-7.98	101.32
-4.91	102.49
0.77	102.48
4.56	102.67
7.94	102.51
11.28	101.38
15.18	101.42
22.43	101.59
25.88	102.33
28.95	103.98
31.97	106.17
36.41	109.01
39.71	108.99
42.84	108.50
48.20	107.54



1510+00

-150.00	97.65
-146.20	99.72
-142.30	101.26
-139.07	102.48
-135.86	102.57
-129.13	103.21
-124.55	103.40
-121.10	103.51
-118.01	103.64
-112.45	104.01
-107.79	104.35
-103.88	104.50
-99.25	104.87
-94.56	105.21
-91.44	105.32
-88.43	105.50
-79.94	105.97
-76.39	106.15
-71.76	106.42
-68.34	106.64
-58.49	107.22
-54.66	107.00
-51.51	106.44
-47.70	105.57
-41.89	103.07
-38.18	102.16
-35.10	101.50
-30.58	100.69
-26.02	100.74
-20.97	100.48
-16.81	101.33
-9.21	101.64
-3.80	102.73
-0.34	102.89
3.38	103.05
8.55	102.92
13.84	102.46
17.33	101.51
20.86	100.65
24.30	108.70
28.43	111.50
31.44	113.84
35.75	115.53
38.77	117.57
43.70	115.83
47.14	113.01



1512+00

-150.00	95.84
-146.68	98.03
-143.12	100.49
-138.73	102.38
-135.45	102.71
-132.30	102.79
-128.40	102.94
-124.36	103.21
-119.81	103.46
-115.83	103.51
-111.89	103.81
-104.29	104.29
-100.69	104.45
-96.87	104.68
-91.23	104.99
-87.80	105.23
-83.89	105.44
-80.30	105.64
-76.62	105.81
-70.22	106.19
-67.11	106.30
-63.86	106.50
-59.76	106.73
-54.84	106.51
-47.92	104.71
-42.62	101.76
-38.64	100.50
-34.54	99.40
-30.93	98.84
-27.29	98.54
-24.00	98.32
-19.36	100.04
-12.79	101.30
-7.99	101.50
-3.97	102.57
0.28	102.65
3.28	102.69
8.43	102.77
12.18	101.76
16.85	101.78
19.98	101.98
25.50	105.86
29.60	109.33
32.66	111.20
37.26	111.50
43.98	110.58
47.10	109.75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55773\ipsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-X5.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

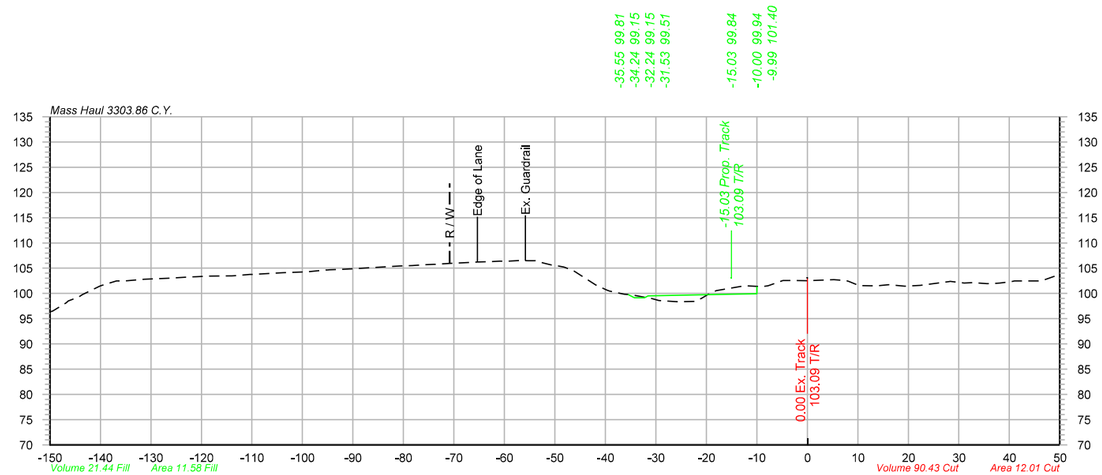
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 022 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

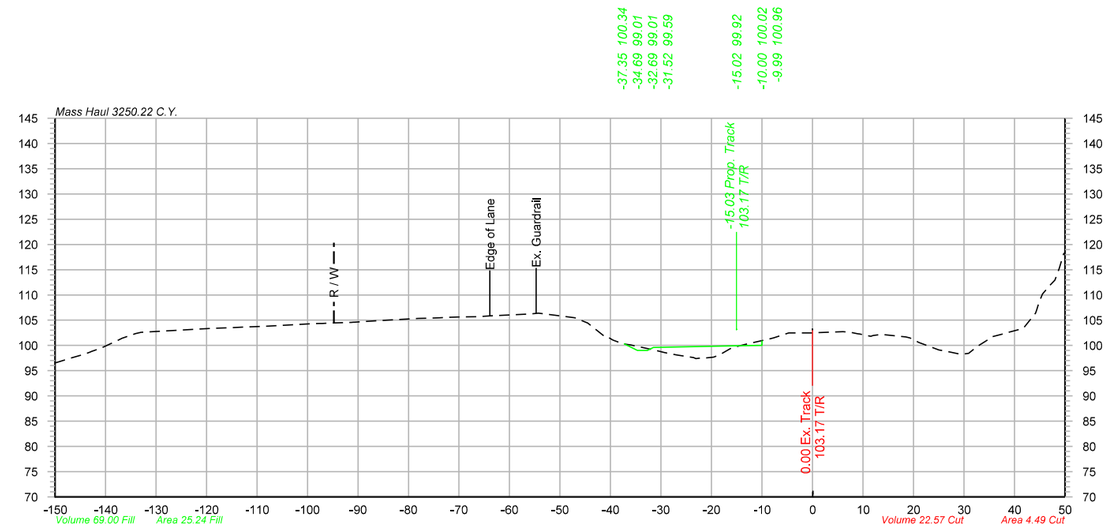
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1510+00 TO STA.1513+00



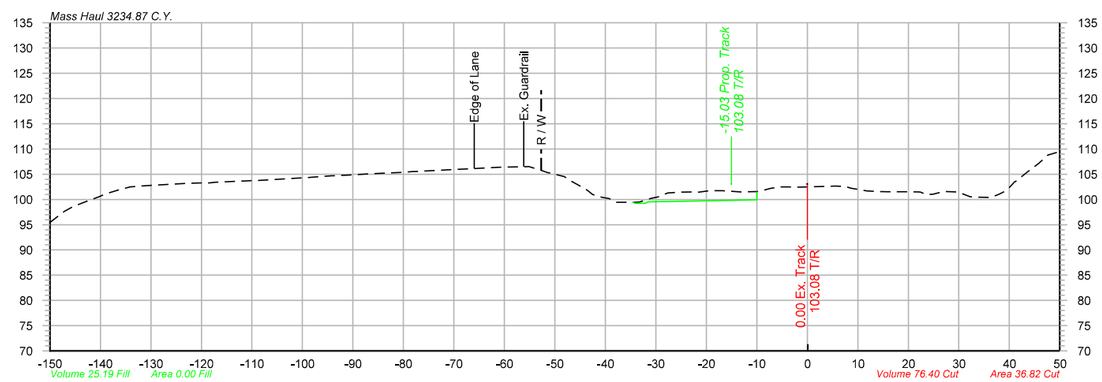
1515+00

-150.00	96.36
-146.79	98.14
-143.59	99.77
-140.06	101.48
-136.83	102.46
-131.41	102.79
-126.41	103.03
-122.93	103.22
-118.46	103.44
-114.47	103.47
-110.38	103.77
-103.93	104.11
-99.46	104.28
-95.78	104.61
-92.24	104.79
-83.57	105.29
-78.21	105.53
-73.91	105.77
-65.82	106.19
-62.41	106.32
-59.23	106.41
-55.25	106.47
-50.05	105.49
-46.33	104.54
-41.91	101.70
-36.27	99.86
-30.73	98.99
-25.58	98.37
-22.19	98.44
-18.05	100.54
-13.64	101.30
-8.93	101.36
-5.08	102.47
0.07	102.50
4.04	102.69
7.49	102.55
12.49	101.50
16.07	101.73
19.31	101.43
22.41	101.51
28.10	102.37
32.83	102.16
36.94	101.97
40.46	102.36
45.72	102.50
50.00	103.77



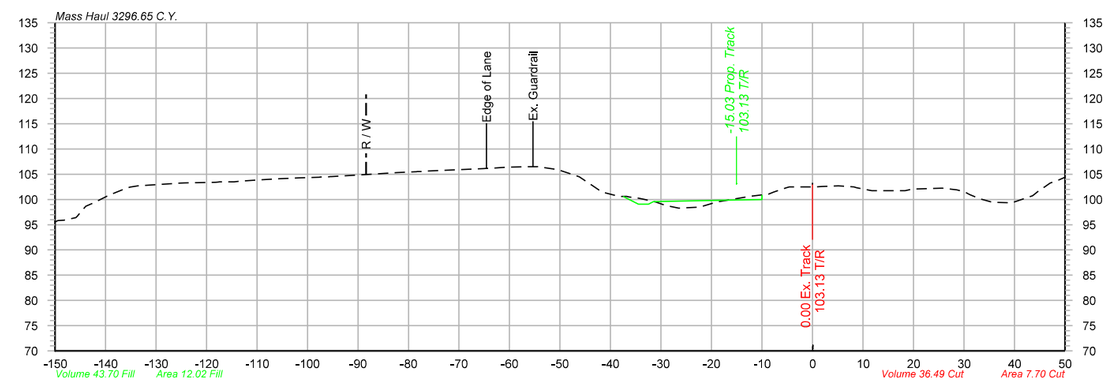
1517+00

-150.00	96.54
-146.94	97.49
-143.17	98.66
-137.47	101.06
-134.05	102.36
-121.85	103.23
-118.70	103.39
-115.01	103.50
-112.00	103.64
-108.09	103.82
-99.01	104.29
-95.69	104.42
-91.32	104.57
-84.08	105.00
-78.03	105.34
-73.82	105.48
-69.85	105.66
-66.56	105.69
-59.50	106.07
-55.98	106.21
-49.32	105.78
-46.23	105.14
-40.85	101.53
-36.87	100.23
-31.17	99.05
-26.80	98.10
-23.55	97.59
-19.61	97.67
-16.02	99.50
-11.97	100.50
-8.43	101.32
-5.07	102.34
-0.22	102.49
6.04	102.72
9.33	102.29
13.68	102.19
18.53	101.68
21.70	100.35
25.06	99.09
29.25	98.26
32.63	99.80
38.16	102.41
41.76	103.39
44.85	108.47
48.02	112.92



1514+00

-150.00	95.43
-145.62	98.48
-140.41	100.50
-136.35	101.91
-131.98	102.66
-127.99	102.90
-123.54	103.17
-119.95	103.28
-115.53	103.49
-111.89	103.64
-106.33	103.92
-102.27	104.15
-98.55	104.36
-94.11	104.69
-90.98	104.80
-86.88	105.07
-82.26	105.28
-78.12	105.52
-73.59	105.74
-70.57	105.91
-65.99	106.12
-62.12	106.32
-55.62	106.50
-52.51	105.69
-48.11	104.50
-44.16	102.19
-40.60	100.40
-36.93	99.43
-33.23	99.48
-29.50	100.51
-25.35	101.44
-21.54	101.46
-18.47	101.75
-14.91	101.62
-11.80	101.53
-7.29	102.20
-1.18	102.45
5.54	102.65
8.62	102.25
11.76	101.68
15.90	101.54
19.56	101.52
23.59	100.94
27.09	101.59
30.85	101.06
34.14	100.43
37.96	101.03
41.03	103.47
45.95	107.23
50.00	109.48



1516+00

-150.00	95.51
-145.90	96.40
-142.30	99.37
-136.30	102.07
-127.17	103.12
-122.55	103.30
-118.14	103.41
-114.54	103.49
-109.84	103.85
-105.40	104.09
-101.67	104.27
-97.58	104.42
-89.57	104.85
-86.27	105.05
-82.34	105.30
-78.59	105.50
-73.79	105.74
-65.09	106.10
-61.56	106.32
-56.21	106.50
-50.45	105.89
-46.19	104.46
-41.73	101.50
-38.18	100.58
-34.76	100.32
-30.99	99.49
-27.27	98.45
-22.35	98.48
-19.08	99.44
-13.16	100.49
-8.67	101.05
-5.17	102.31
-1.17	102.50
1.87	102.55
5.12	102.70
8.22	102.50
11.74	101.73
15.89	101.74
19.46	101.98
25.63	102.24
30.18	101.50
35.66	99.44
38.68	99.34
43.58	100.75
46.95	103.15
50.00	104.41

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\oma65573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

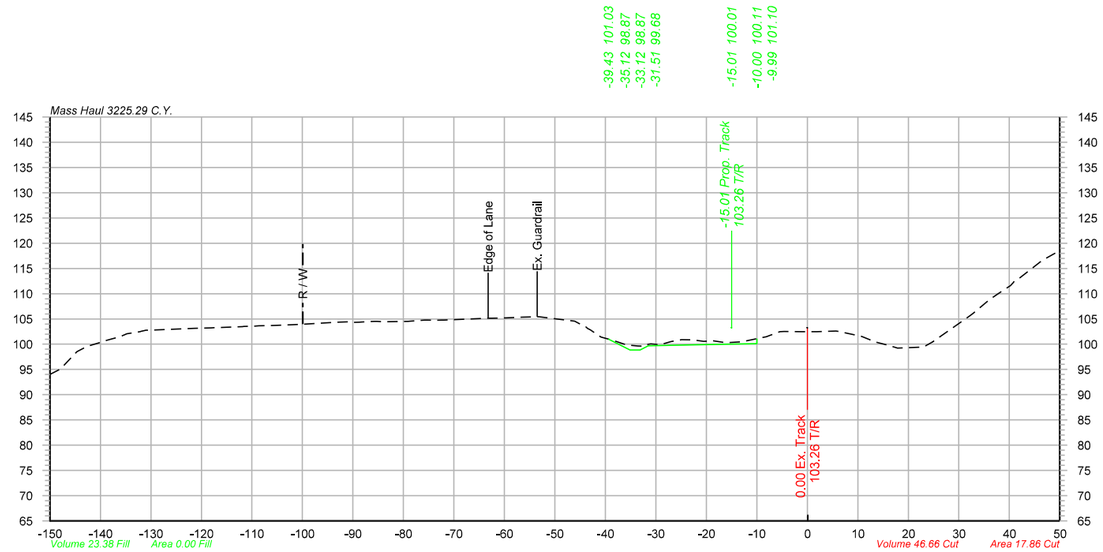
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 023 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

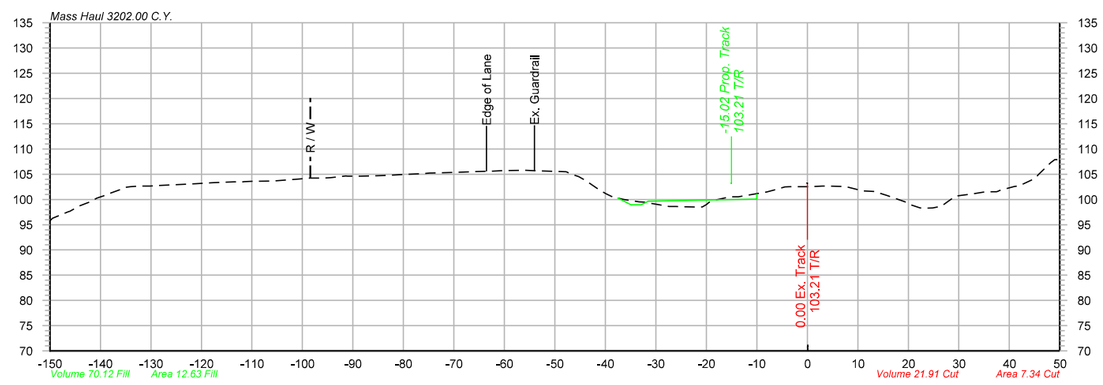
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1514+00 TO STA.1517+00



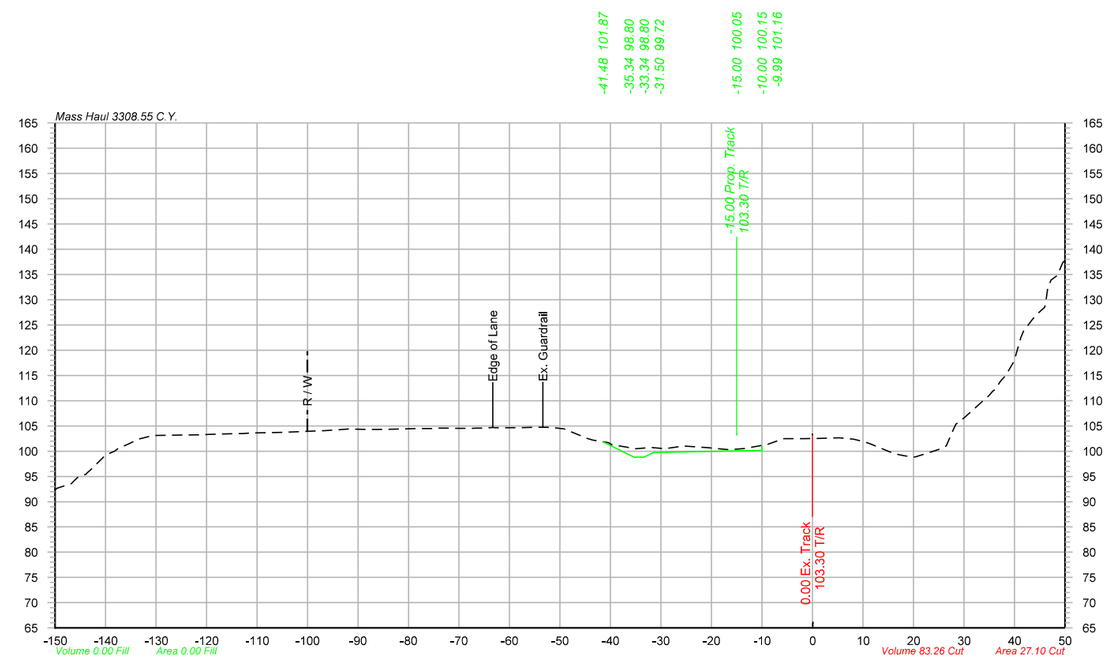
1519+00

-150.00	94.04
-144.64	98.53
-140.27	100.28
-136.12	101.50
-132.15	102.48
-121.33	103.13
-118.07	103.25
-111.83	103.50
-108.64	103.64
-105.21	103.72
-102.05	103.85
-96.67	104.13
-93.14	104.37
-88.80	104.37
-85.70	104.52
-79.05	104.53
-75.80	104.75
-72.47	104.77
-63.23	105.13
-56.42	105.34
-53.15	105.44
-49.52	104.98
-46.08	104.55
-43.00	102.85
-38.66	100.82
-33.60	99.65
-29.14	99.89
-24.92	100.90
-20.55	100.54
-16.81	100.39
-12.95	100.49
-9.58	101.19
-5.43	102.50
-1.17	102.49
1.89	102.49
5.69	102.60
10.66	101.54
15.94	99.80
22.96	99.45
32.00	105.48
36.11	108.85
40.23	111.60
45.18	115.56
49.17	118.06



1518+00

-150.00	95.77
-146.38	97.55
-141.74	99.66
-137.96	101.27
-134.07	102.54
-130.20	102.65
-121.96	103.06
-117.73	103.31
-113.61	103.46
-109.69	103.59
-105.79	103.67
-100.88	104.03
-96.74	104.25
-91.41	104.63
-85.28	104.70
-82.19	104.82
-76.08	105.11
-72.83	105.29
-65.33	105.51
-62.19	105.62
-58.74	105.75
-54.09	105.68
-48.98	105.52
-45.31	104.51
-41.07	101.80
-36.30	100.00
-32.45	99.48
-27.84	98.70
-21.21	98.49
-17.94	99.95
-14.37	100.51
-8.77	101.36
-4.44	102.49
0.42	102.53
4.15	102.65
7.16	102.55
10.79	101.74
14.12	101.33
19.36	99.51
22.36	98.33
26.50	98.66
29.57	100.69
32.76	101.12
36.68	101.52
40.99	102.56
45.16	104.19
48.22	107.33



1520+00

-150.00	92.37
-146.80	93.56
-143.65	95.68
-139.96	99.26
-135.70	101.33
-131.77	102.82
-125.27	103.20
-121.96	103.24
-116.98	103.42
-112.87	103.50
-109.13	103.66
-104.91	103.75
-97.81	104.02
-91.17	104.44
-88.04	104.33
-83.02	104.38
-78.34	104.50
-74.40	104.55
-70.54	104.51
-67.26	104.53
-63.32	104.67
-57.77	104.67
-52.59	104.75
-49.27	104.45
-45.80	103.04
-40.63	101.73
-34.94	100.50
-29.13	100.50
-25.50	101.02
-20.62	100.68
-16.72	100.30
-13.50	100.52
-9.09	101.33
-5.63	102.48
-1.57	102.49
5.30	102.67
10.43	101.83
15.12	99.95
18.12	99.12
22.34	99.50
25.41	100.45
29.75	106.40
33.46	109.69
37.32	113.95
41.25	122.48
44.60	127.24
48.51	134.83

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\ipsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i.Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-X5.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

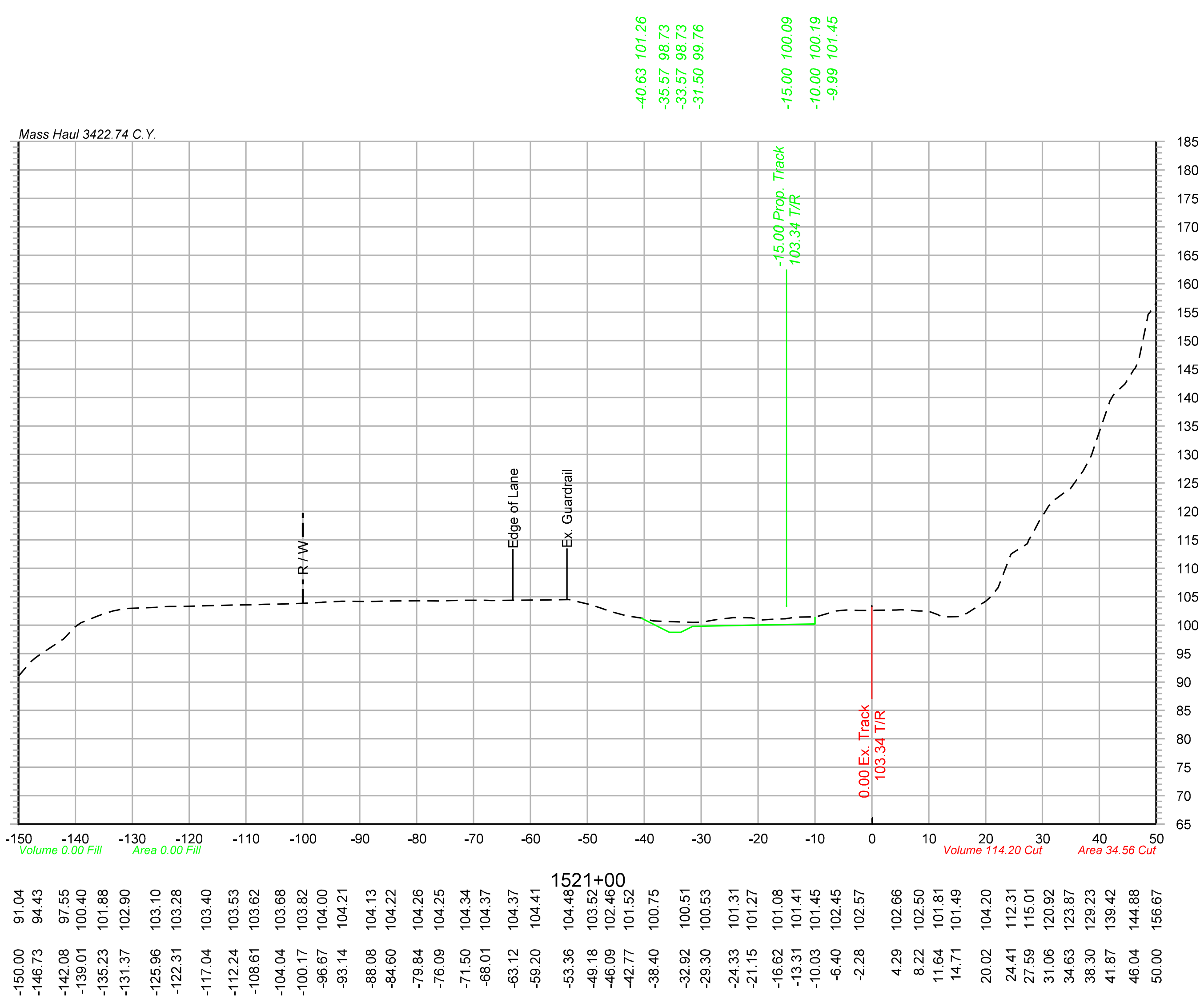
UNION PACIFIC

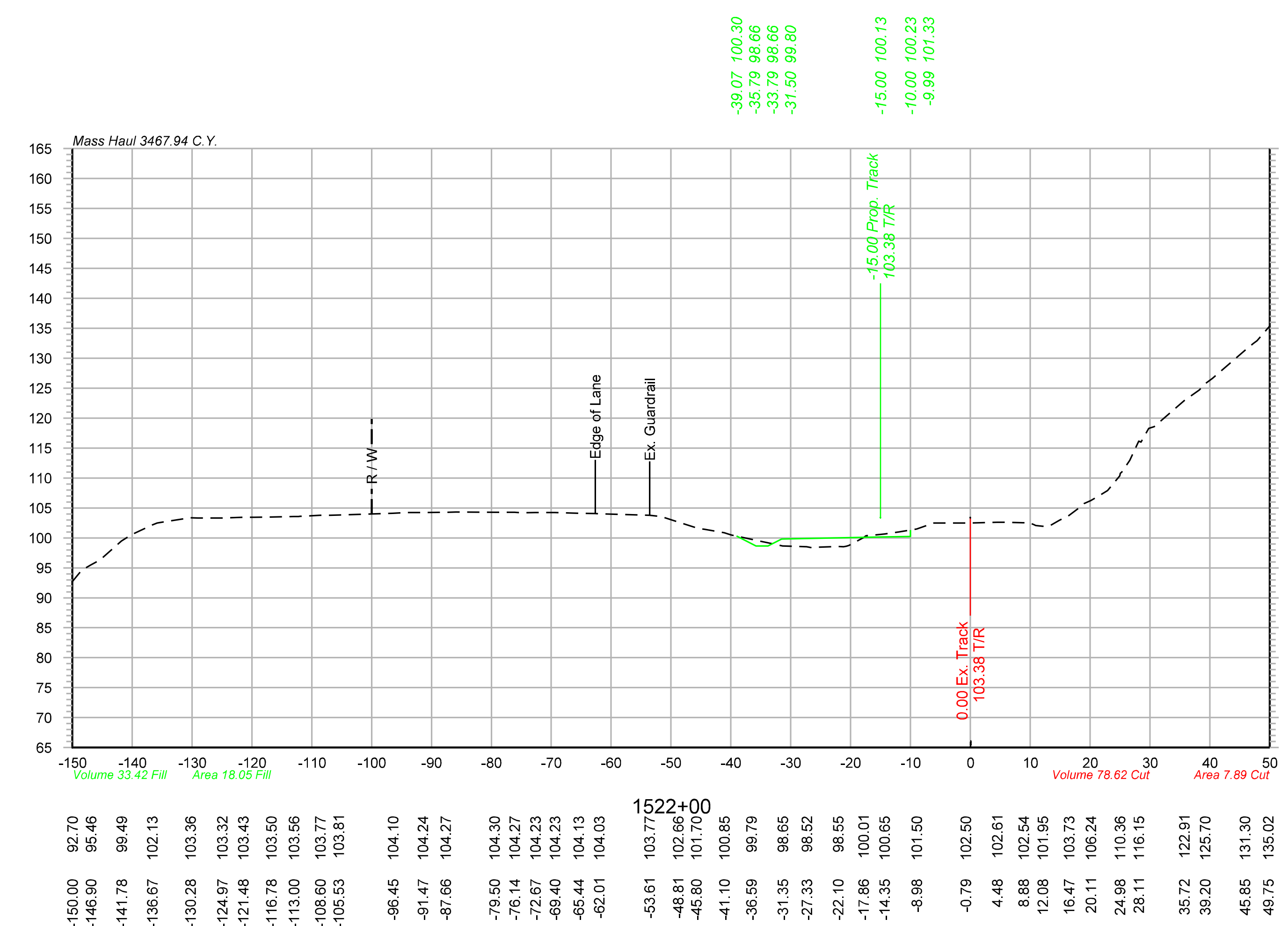
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 024 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1518+00 TO STA.1520+00

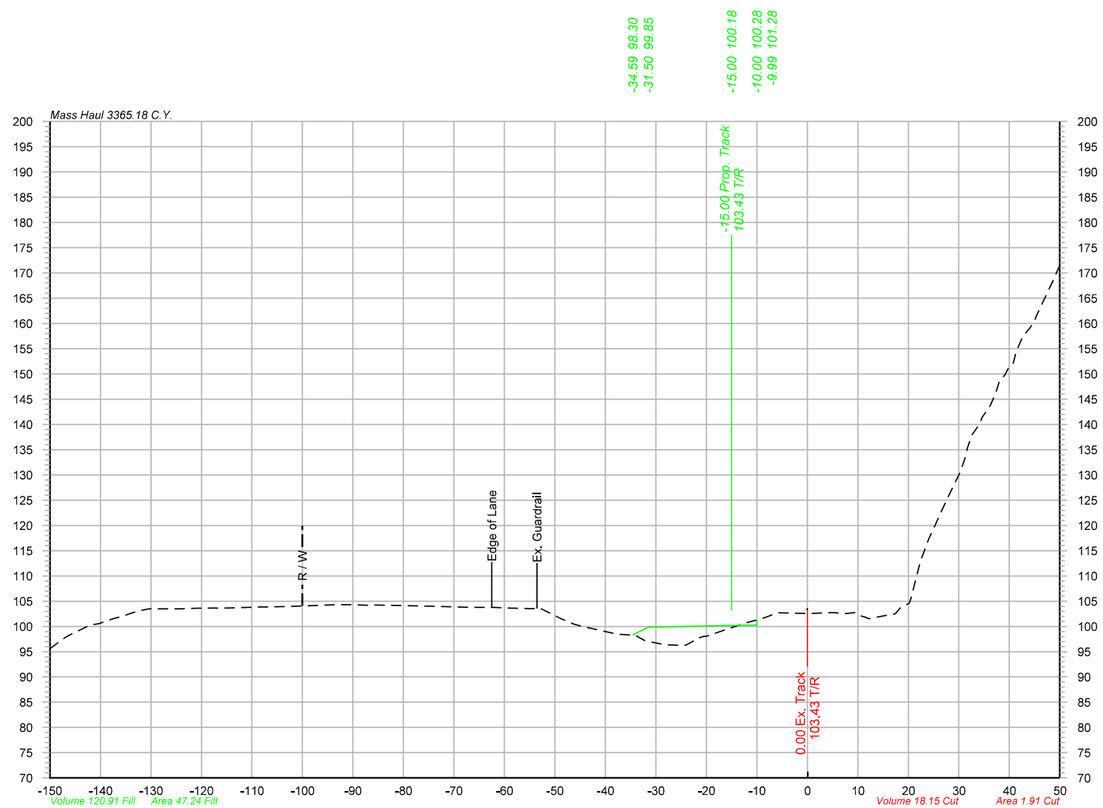




Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

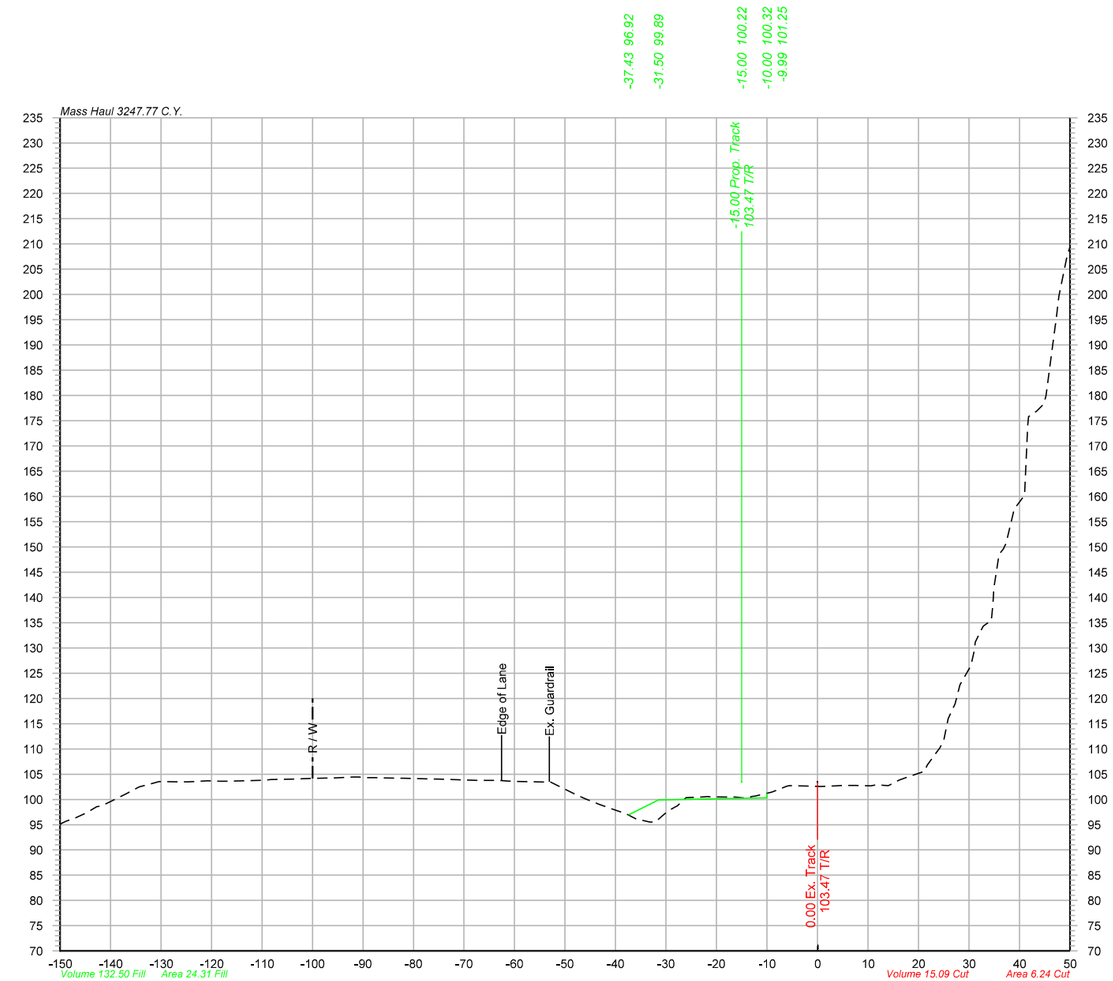
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 025 of 139	SHEET TITLE: CROSS SECTIONS STA.1521+00 TO STA.1522+00



1523+00

-150.00	95.62
-146.97	97.82
-143.64	99.50
-140.42	100.52
-135.23	102.14
-130.40	103.49
-126.75	103.48
-123.10	103.54
-117.42	103.66
-109.08	103.82
-103.08	103.95
-97.30	104.13
-90.67	104.30
-87.50	104.21
-80.61	104.16
-75.94	104.04
-72.37	103.93
-66.56	103.77
-62.70	103.78
-59.69	103.65
-54.43	103.51
-49.81	102.07
-46.31	100.49
-41.98	99.45
-38.31	98.62
-35.26	98.33
-31.96	97.06
-28.93	96.51
-25.36	96.26
-22.15	97.50
-16.69	99.20
-11.76	100.81
-6.35	102.50
0.60	102.56
4.39	102.71
7.43	102.55
10.90	101.99
16.71	102.41
20.17	104.60
24.03	117.28
28.60	127.14
31.68	135.34
34.71	141.55
38.09	148.66
41.35	154.42
44.98	160.47
48.48	168.13



1524+00

-150.00	95.05
-146.83	96.42
-142.73	98.55
-138.21	100.49
-134.35	102.50
-131.35	103.29
-126.53	103.50
-122.89	103.58
-118.48	103.63
-110.63	103.78
-103.94	104.04
-100.69	104.14
-97.31	104.22
-91.99	104.42
-88.05	104.31
-81.60	104.20
-76.90	104.06
-72.38	103.94
-67.44	103.79
-63.83	103.76
-59.54	103.57
-53.77	103.46
-47.71	100.91
-43.10	98.99
-37.83	97.14
-33.17	95.53
-29.63	97.69
-26.03	100.37
-22.97	100.49
-18.50	100.50
-14.84	100.31
-9.10	101.46
-5.55	102.75
-1.88	102.63
3.65	102.70
7.56	102.76
11.66	102.90
16.15	103.80
20.68	105.39
24.27	110.24
27.27	118.96
30.40	126.50
33.58	134.89
36.81	149.59
41.03	160.26
44.81	178.30
47.83	199.64

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

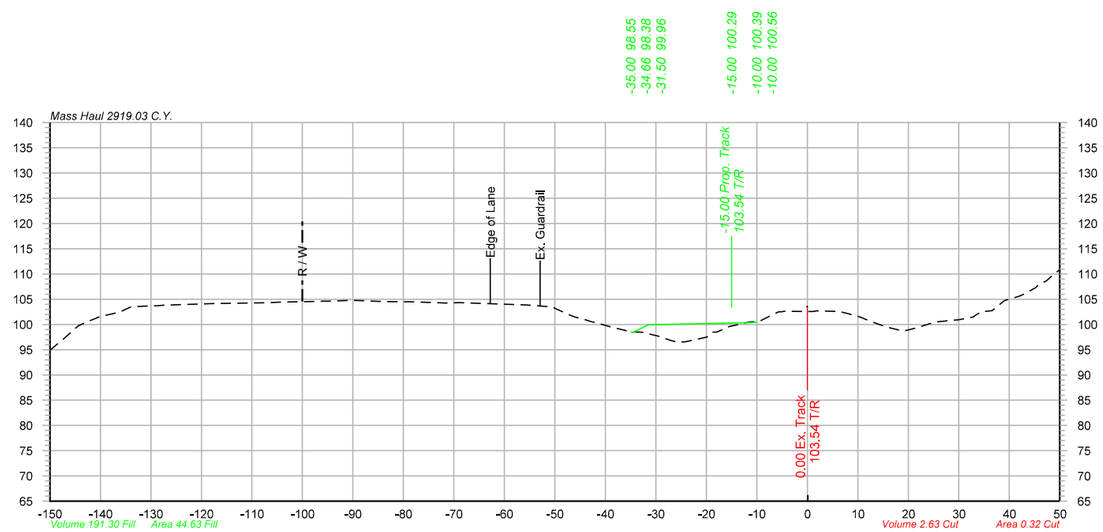
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 026 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1523+00 TO STA.1524+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\upprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



-35.00 98.55
-34.66 98.38
-31.50 99.96

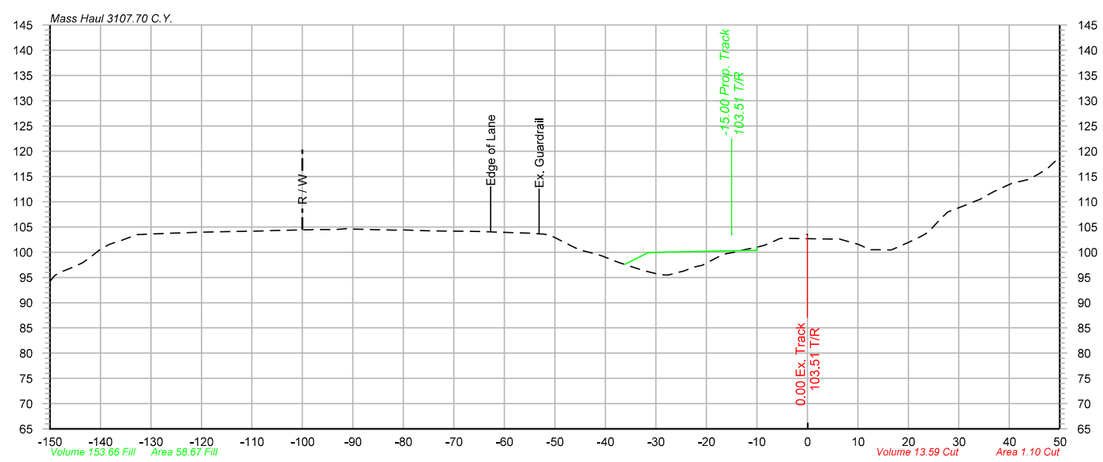
-15.00 100.29
-10.00 100.39
-10.00 100.56

1526+00

-150.00	94.90
-146.94	97.45
-142.68	100.49
-136.04	102.49
-133.02	103.52
-128.94	103.71
-120.94	104.04
-117.23	104.13
-113.94	104.21
-108.44	104.27
-103.69	104.46
-96.78	104.58
-91.39	104.73
-87.78	104.68
-84.58	104.58
-78.93	104.50
-75.05	104.37
-71.61	104.23
-66.61	104.25
-62.78	104.11
-55.64	103.86
-52.44	103.61
-47.03	101.88
-43.85	100.90
-38.56	99.40
-35.01	98.55
-31.77	98.25
-27.16	96.86
-24.14	96.58
-20.53	97.34
-17.14	98.85
-12.46	100.27
-7.62	101.56
-4.56	102.61
-0.25	102.57
6.34	102.56
10.30	101.52
14.17	100.03
17.92	98.94
22.02	99.45
25.39	100.53
28.73	100.80
32.88	101.50
36.61	102.74
41.90	105.56
45.21	107.28
48.48	109.67

-36.19 97.59
-31.50 99.93

-15.00 100.26
-10.00 100.36
-9.99 101.00

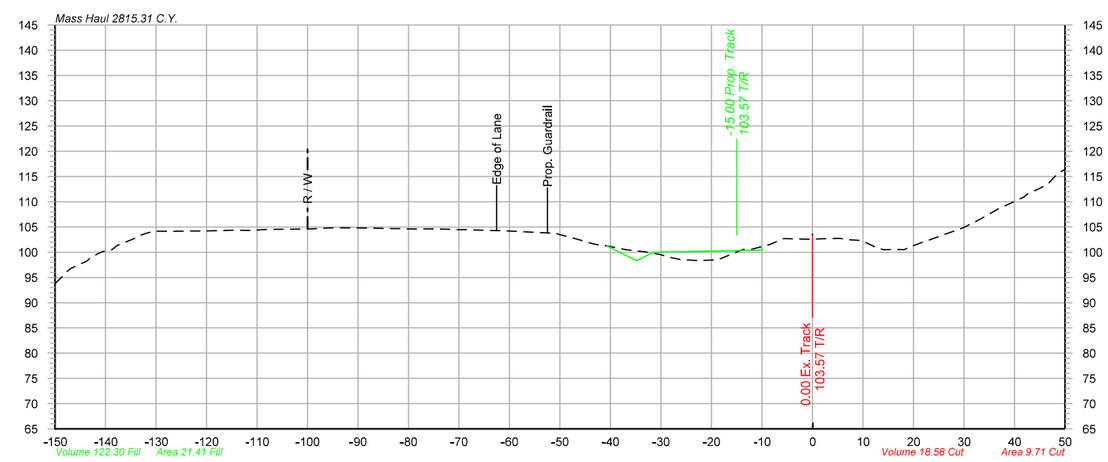


1525+00

-150.00	94.20
-145.66	96.93
-142.64	98.52
-138.37	101.47
-134.55	102.82
-129.79	103.62
-125.68	103.76
-120.73	103.93
-117.09	104.03
-113.09	104.13
-108.23	104.20
-98.60	104.45
-94.22	104.50
-90.81	104.70
-87.73	104.52
-83.92	104.43
-77.46	104.33
-72.55	104.21
-67.89	104.15
-62.74	104.03
-55.31	103.76
-52.15	103.56
-48.37	102.08
-45.28	100.55
-41.76	99.60
-37.40	98.00
-32.82	96.49
-29.03	95.51
-25.51	96.01
-22.42	97.05
-18.37	98.70
-13.94	100.10
-9.12	101.18
-5.37	102.72
-0.78	102.67
4.21	102.61
7.82	102.20
12.00	100.71
15.12	100.49
19.94	101.92
23.95	103.94
27.75	107.96
31.56	109.40
36.88	111.97
40.26	113.52
43.82	114.39
47.70	116.71

-40.75 101.26
-34.85 98.31
-31.50 99.99

-15.00 100.32
-10.00 100.42
-9.99 101.11



1527+00

-150.00	93.79
-146.88	96.77
-142.67	99.10
-138.74	100.49
-133.71	102.93
-130.37	104.15
-126.63	104.16
-123.18	104.17
-115.98	104.33
-111.48	104.31
-107.21	104.51
-101.36	104.57
-96.98	104.73
-93.53	104.83
-87.55	104.79
-81.34	104.64
-78.24	104.59
-74.65	104.60
-71.54	104.54
-67.43	104.40
-62.80	104.29
-55.18	103.96
-50.77	103.72
-46.27	102.49
-42.63	101.50
-37.11	100.52
-33.12	100.08
-27.84	98.91
-24.31	98.44
-19.71	98.46
-14.22	100.36
-11.14	100.80
-5.71	102.68
-0.93	102.58
5.40	102.75
9.65	102.33
13.99	100.48
18.12	100.47
22.27	102.14
26.02	103.45
29.72	104.79
32.97	106.42
36.54	108.43
41.85	110.92
46.56	113.43
49.96	116.40

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 027 of 139

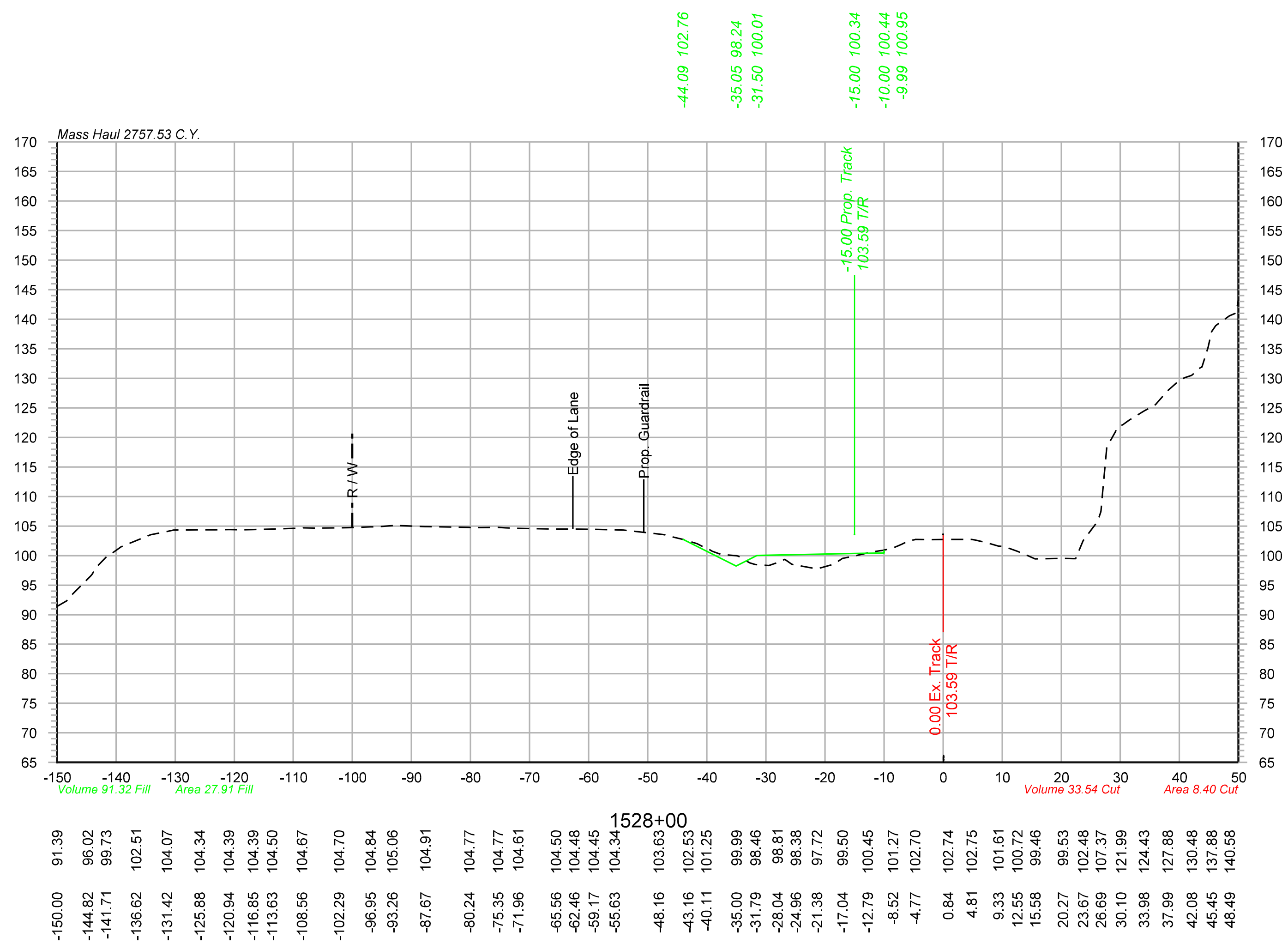
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

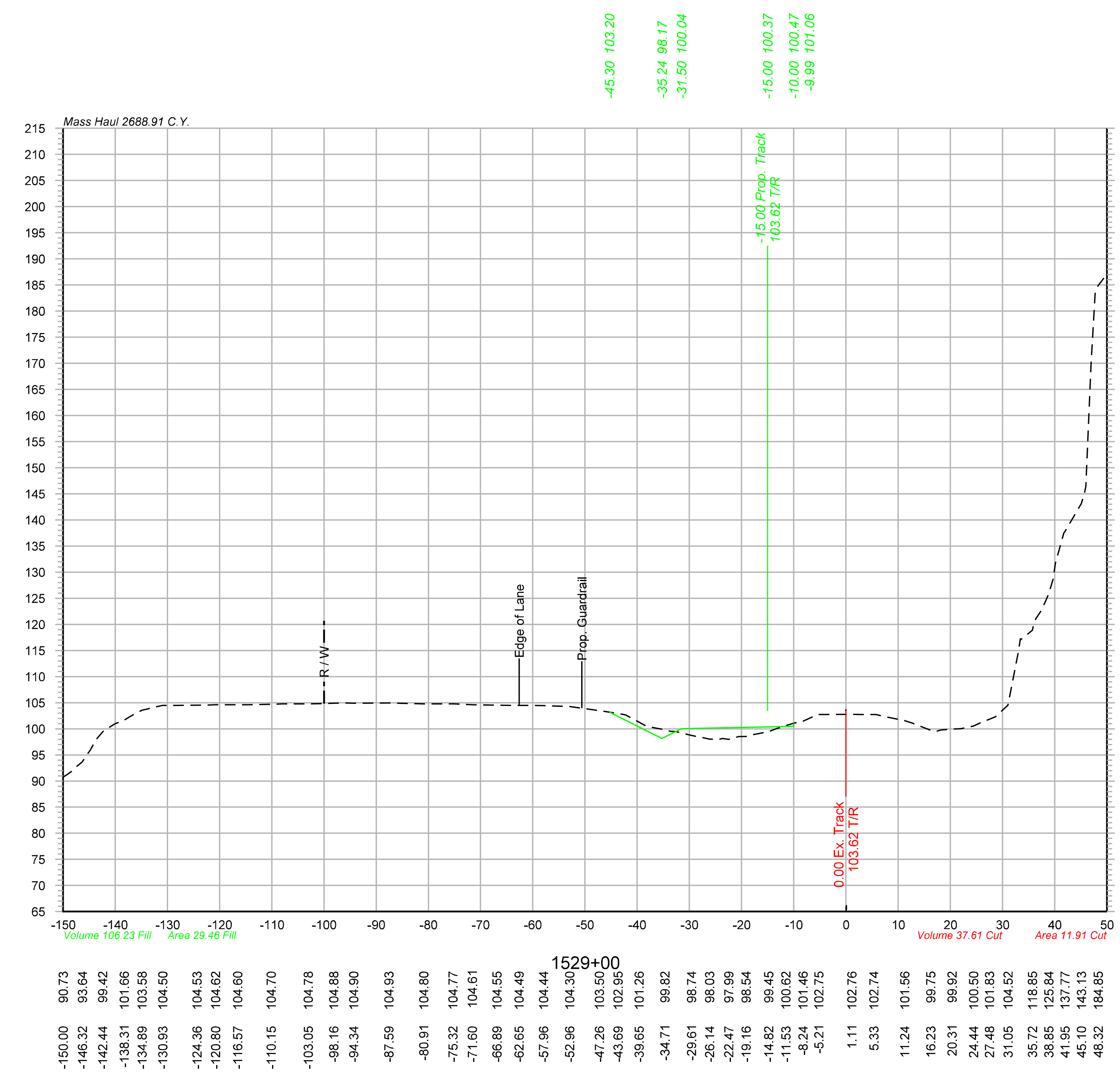
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1525+00 TO STA.1527+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhe5573\ipgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

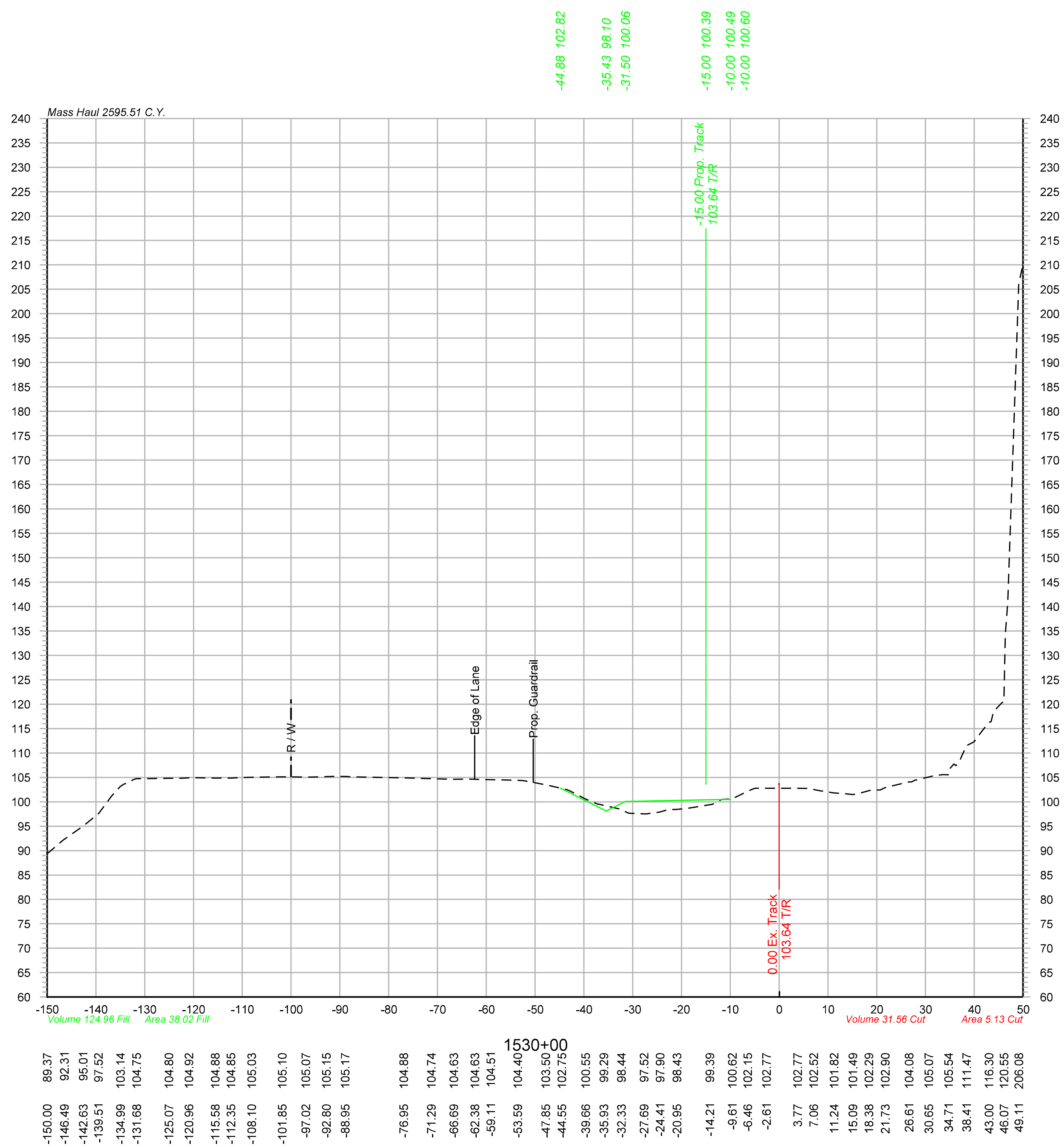
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

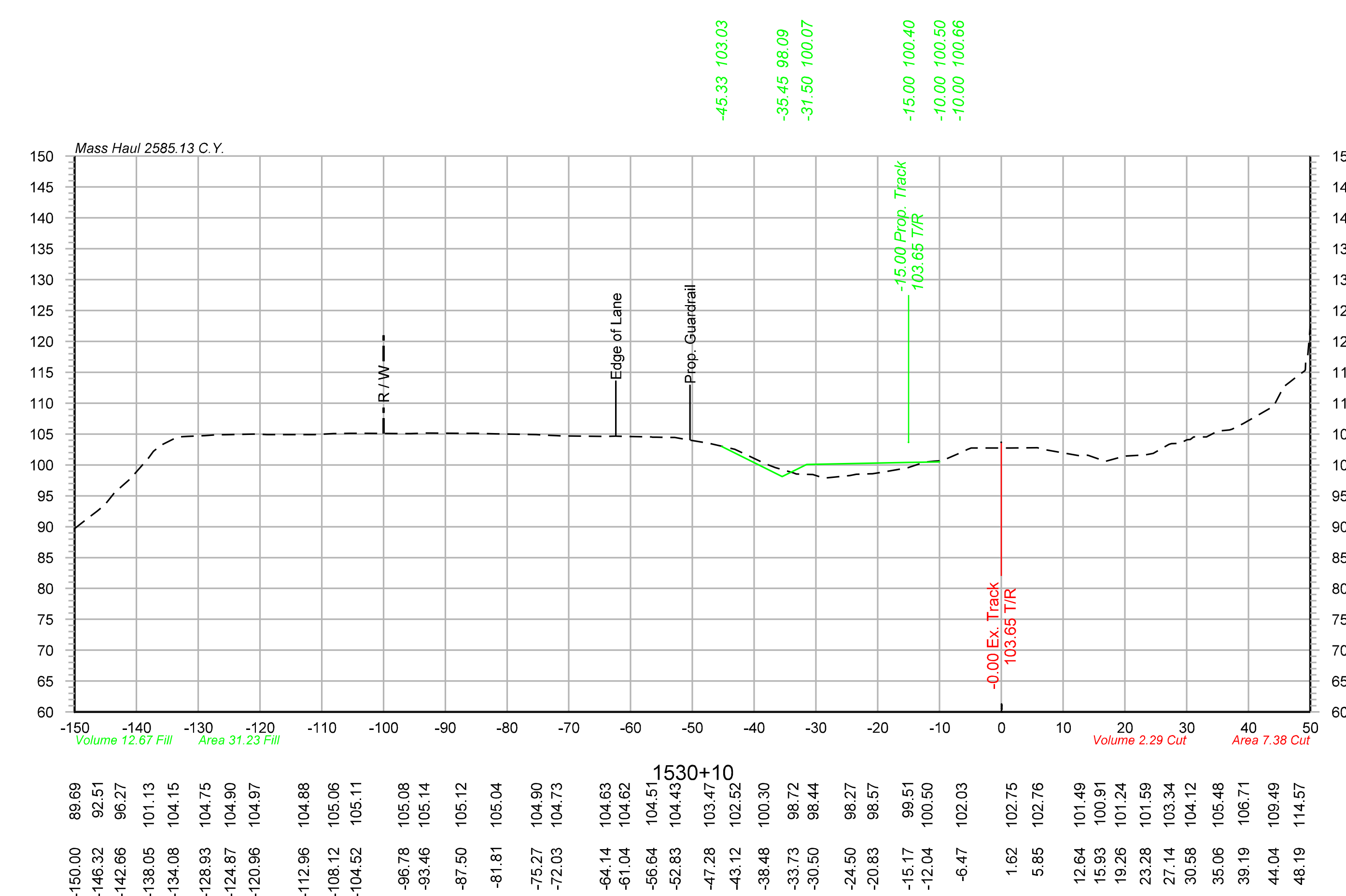




OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD		Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION:	Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline	
DATE: 10/20/2014			
SHEET NUMBER X 028 of 139	SHEET TITLE:	CROSS SECTIONS STA.1528+00 TO STA.1529+00	





OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 029 of 139

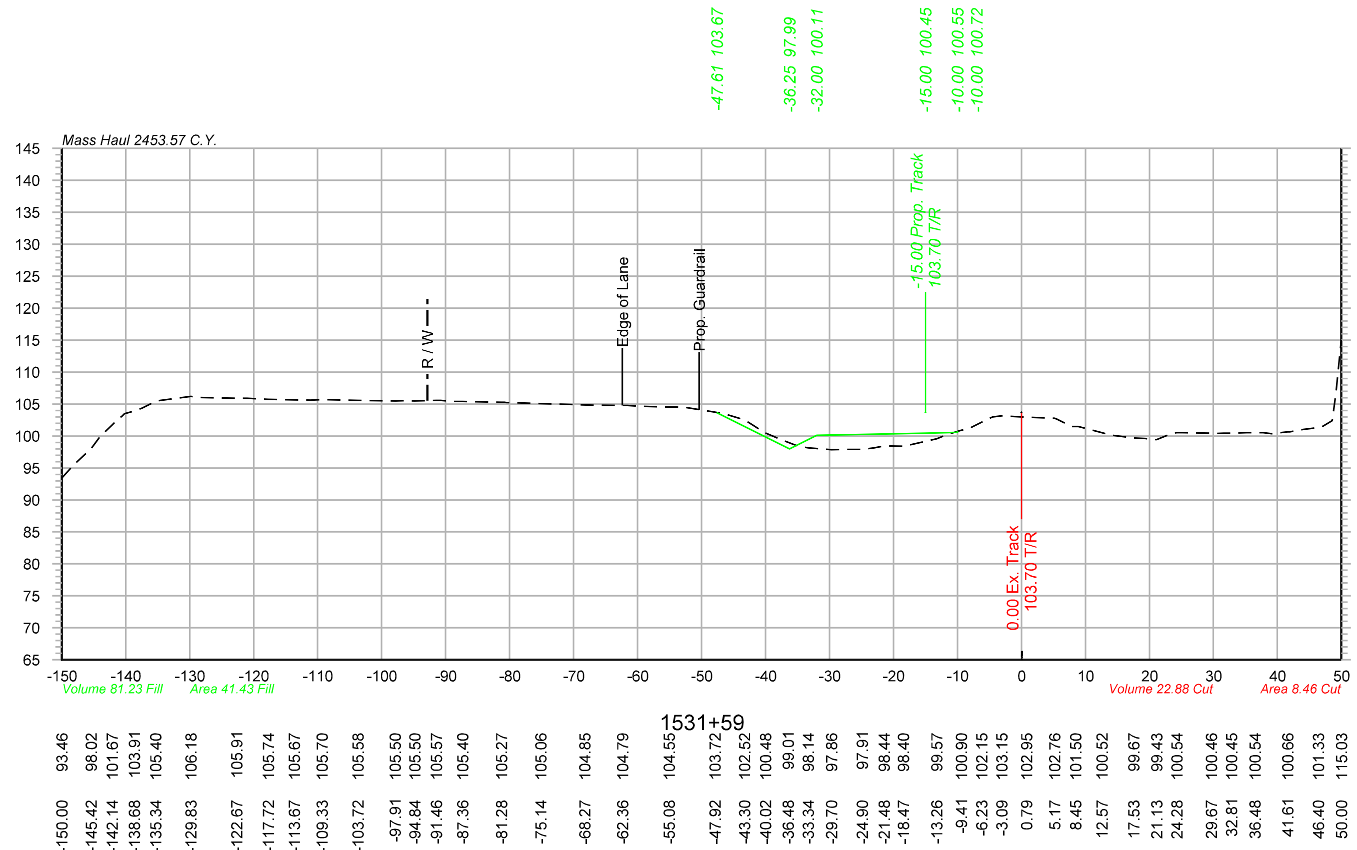
UNION PACIFIC RAILROAD

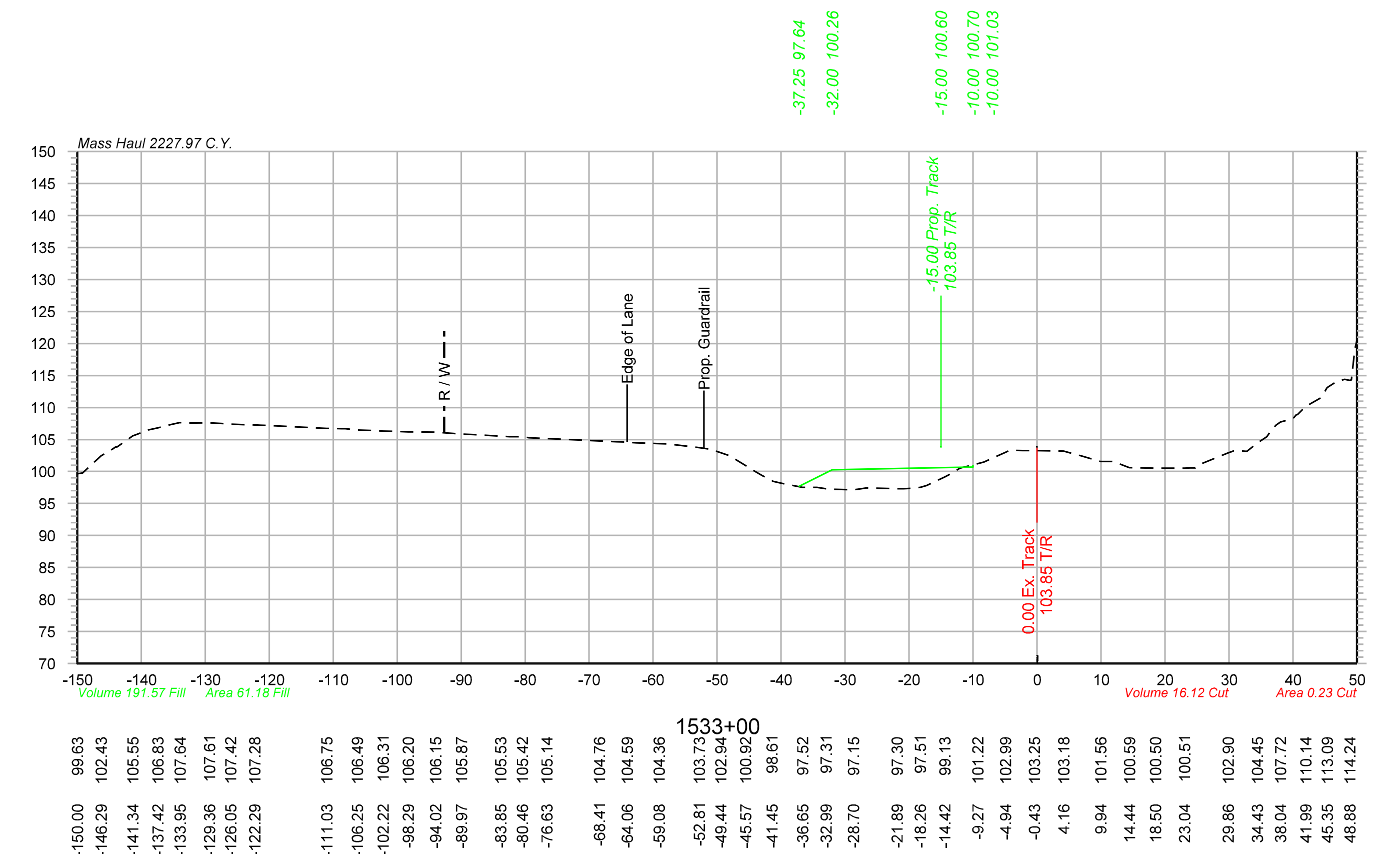
Office of Assistant Vice President
Engineering Design/Construction

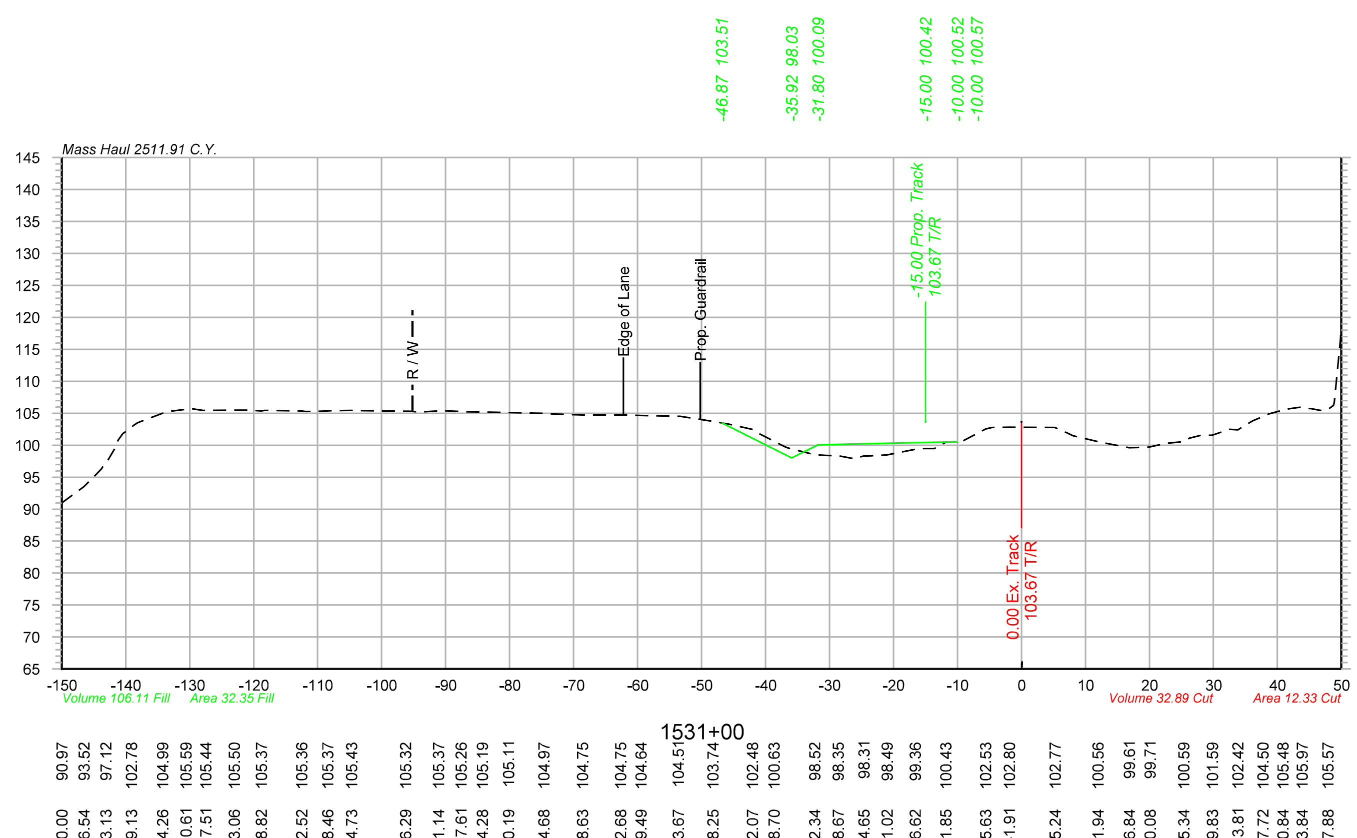
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

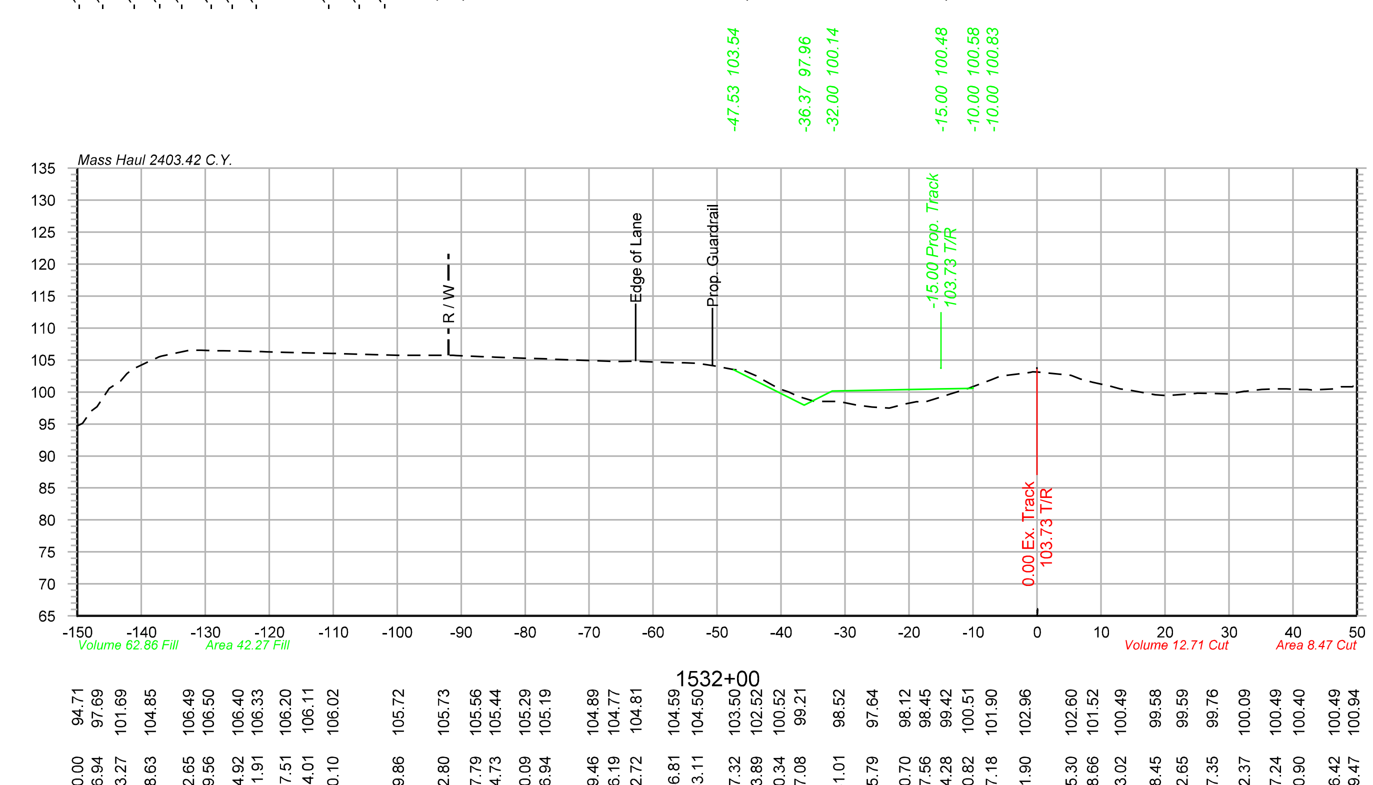
SHEET TITLE:
CROSS SECTIONS STA.1530+00 TO STA.1530+10

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





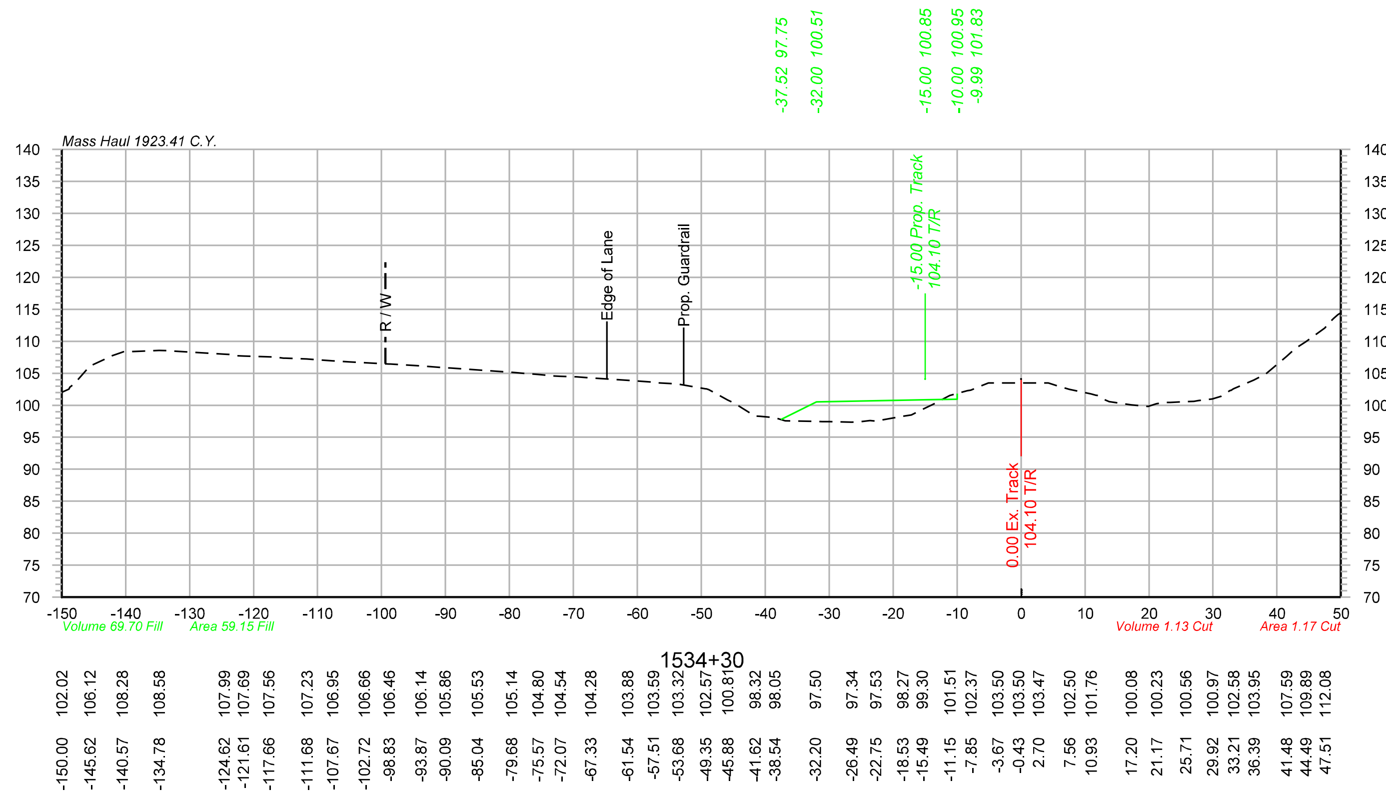


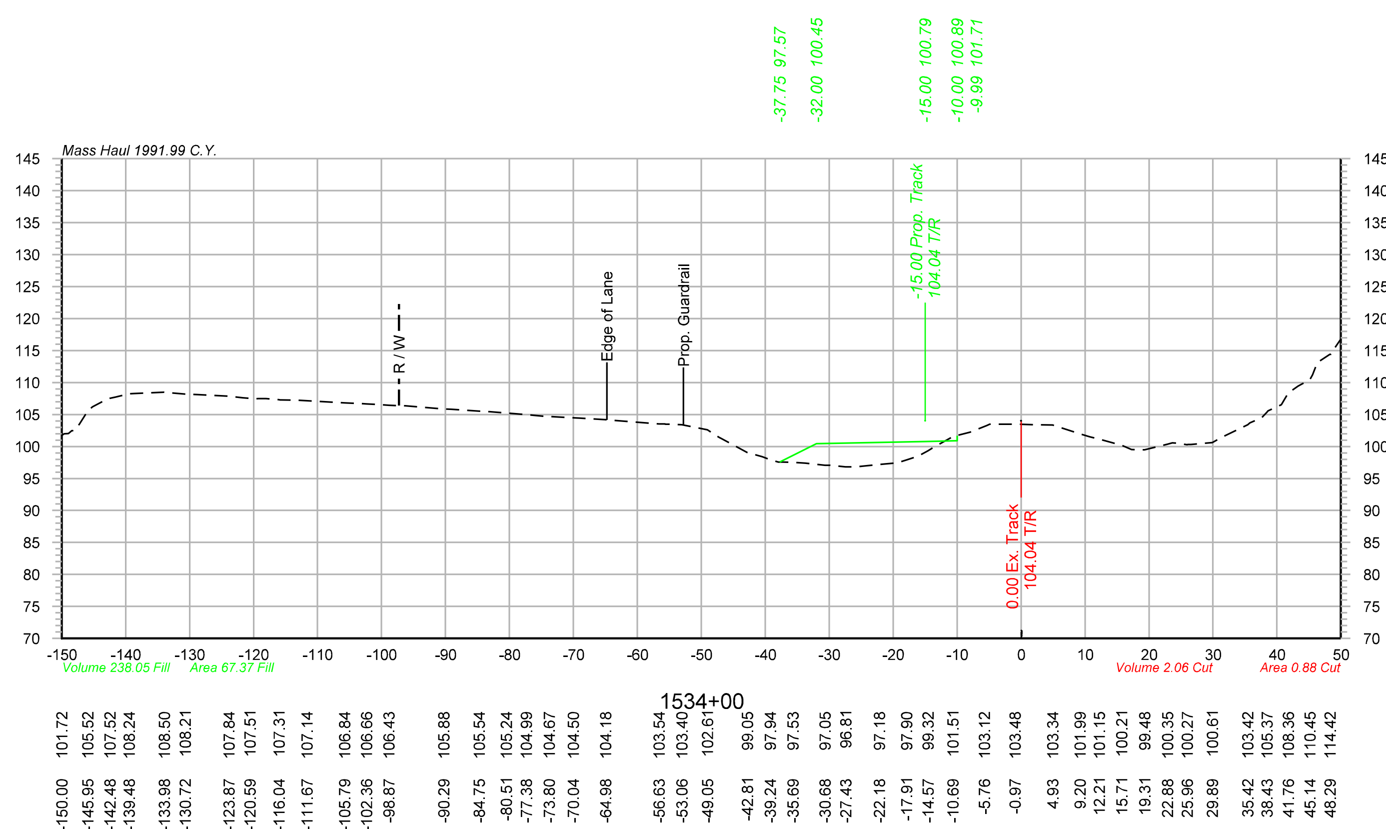


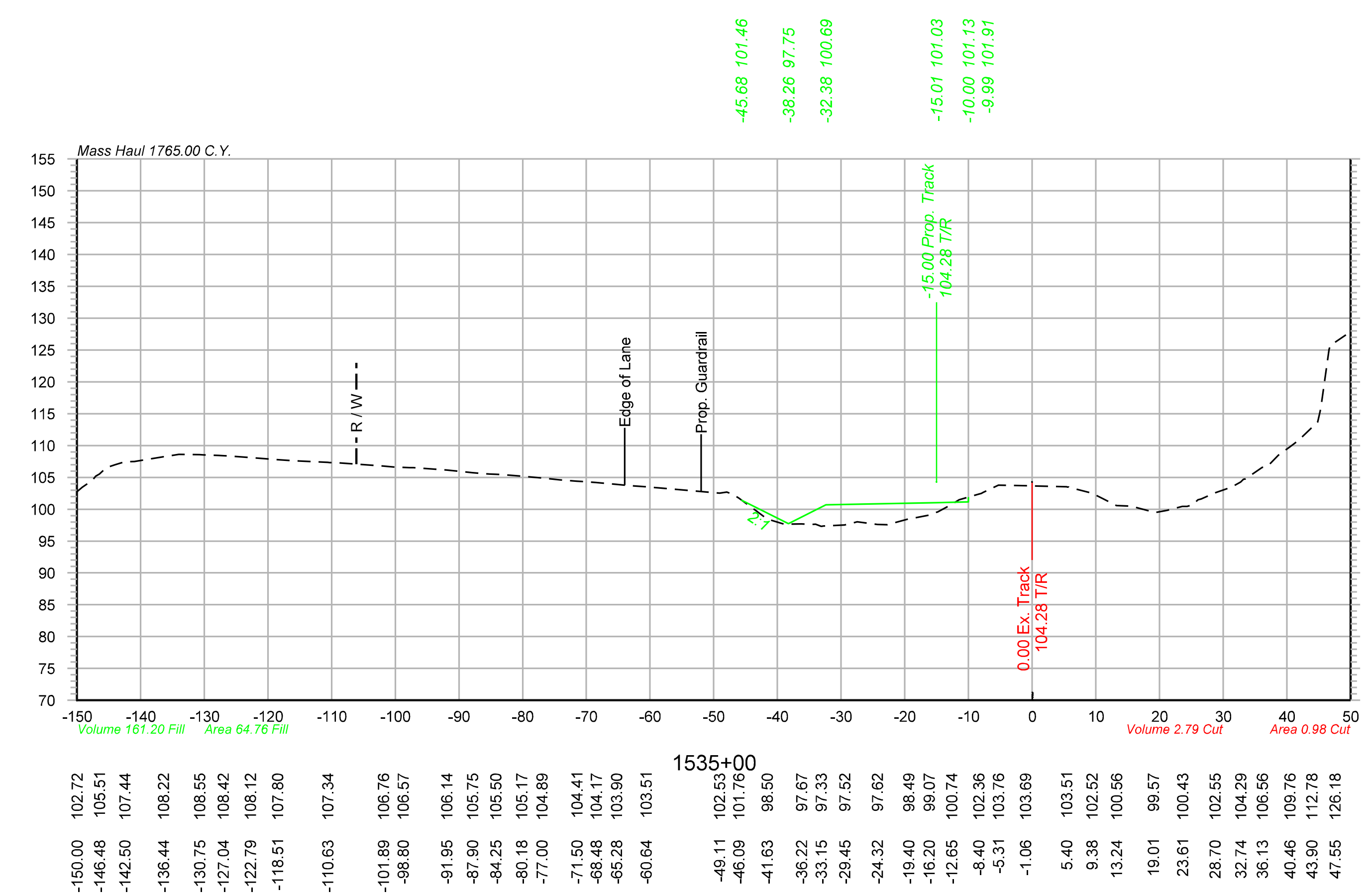
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 030 of 139	SHEET TITLE: CROSS SECTIONS STA.1531+00 TO STA.1533+00







Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

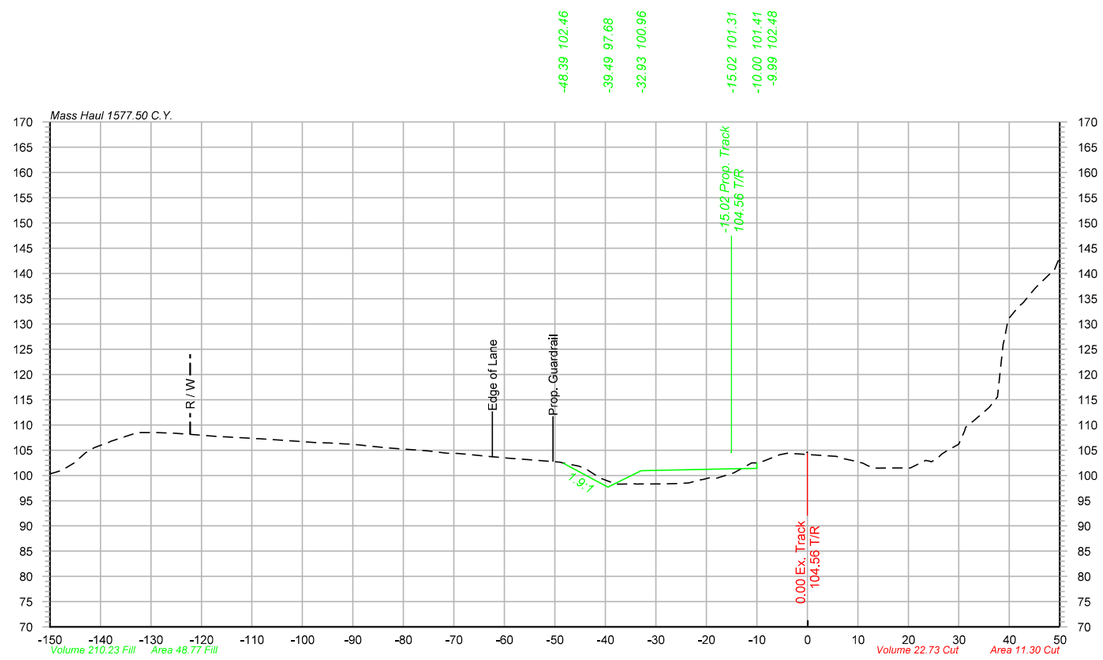
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 031 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

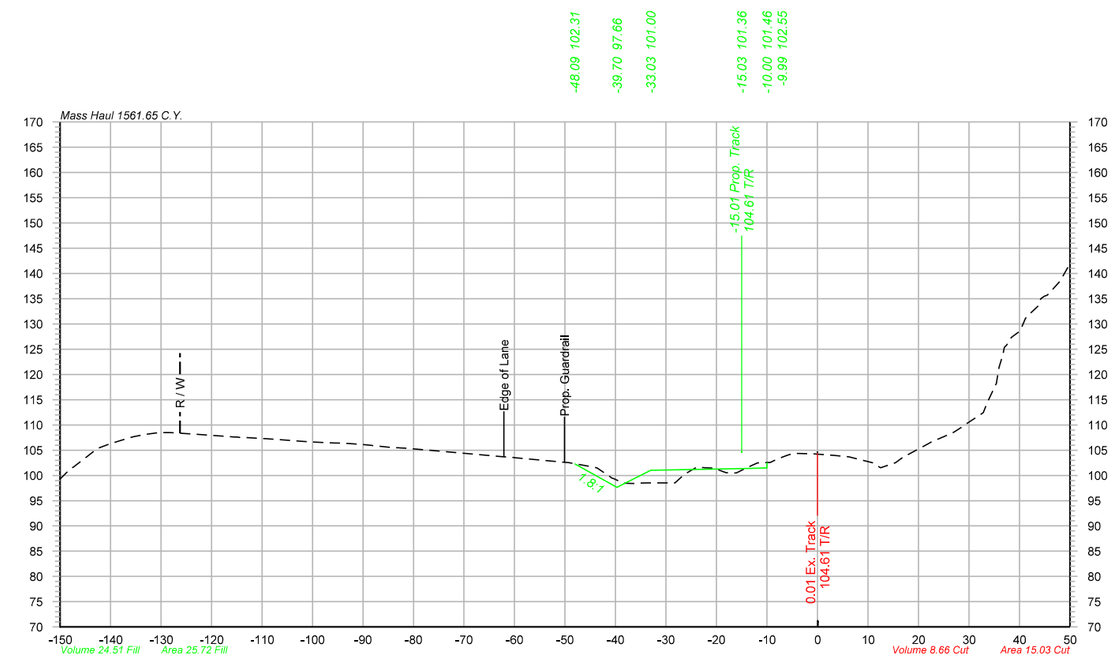
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1534+00 TO STA.1535+00



1536+00

-150.00	100.31
-145.40	102.35
-141.32	105.43
-137.91	106.77
-133.58	108.21
-128.68	108.50
-125.44	108.36
-121.33	108.07
-116.57	107.70
-112.50	107.50
-108.82	107.27
-103.54	106.95
-98.23	106.57
-94.76	106.45
-91.53	106.25
-88.49	106.02
-83.37	105.49
-76.62	104.99
-73.43	104.64
-69.37	104.35
-64.10	103.87
-59.80	103.50
-55.54	103.17
-49.22	102.65
-45.51	101.90
-41.04	99.50
-37.90	98.28
-34.23	98.35
-30.14	98.31
-25.49	98.39
-21.47	99.04
-17.88	99.50
-14.54	100.51
-11.04	102.48
-5.46	104.10
5.76	103.78
9.72	102.78
13.08	101.44
16.10	101.49
19.13	101.49
23.45	103.00
26.56	104.18
29.96	106.18
33.67	111.42
37.55	115.46
41.85	133.45
44.90	136.81
48.12	139.98



1536+18

-150.00	99.26
-145.31	103.25
-142.19	105.48
-139.11	106.58
-135.83	107.57
-130.42	108.50
-122.32	108.11
-117.68	107.78
-114.37	107.53
-110.77	107.36
-106.79	107.11
-103.43	106.86
-99.71	106.63
-96.20	106.45
-92.72	106.32
-88.18	105.92
-83.90	105.50
-76.73	105.00
-72.54	104.62
-62.17	103.71
-49.69	102.57
-44.31	101.64
-40.92	99.63
-37.66	98.43
-33.62	98.50
-30.08	98.54
-26.30	100.27
-22.21	101.51
-18.06	100.53
-13.90	101.55
-9.68	102.57
-6.13	103.93
-0.73	104.27
3.13	103.97
6.23	103.68
10.86	102.52
15.48	102.51
18.67	104.52
22.09	106.34
26.60	108.35
32.29	112.09
35.46	118.34
40.16	128.63
43.66	133.53
48.11	138.52

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 032 of 139

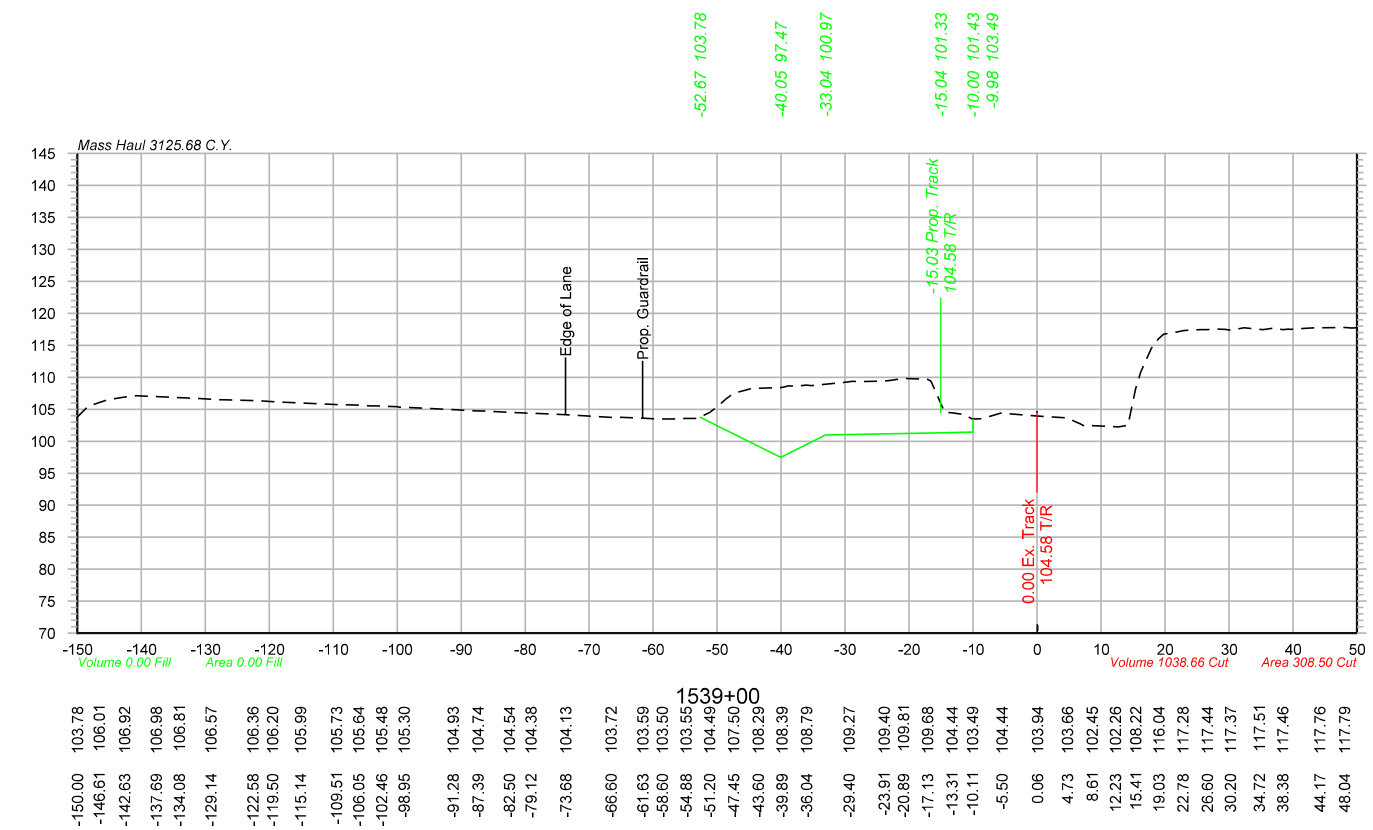
UNION PACIFIC RAILROAD

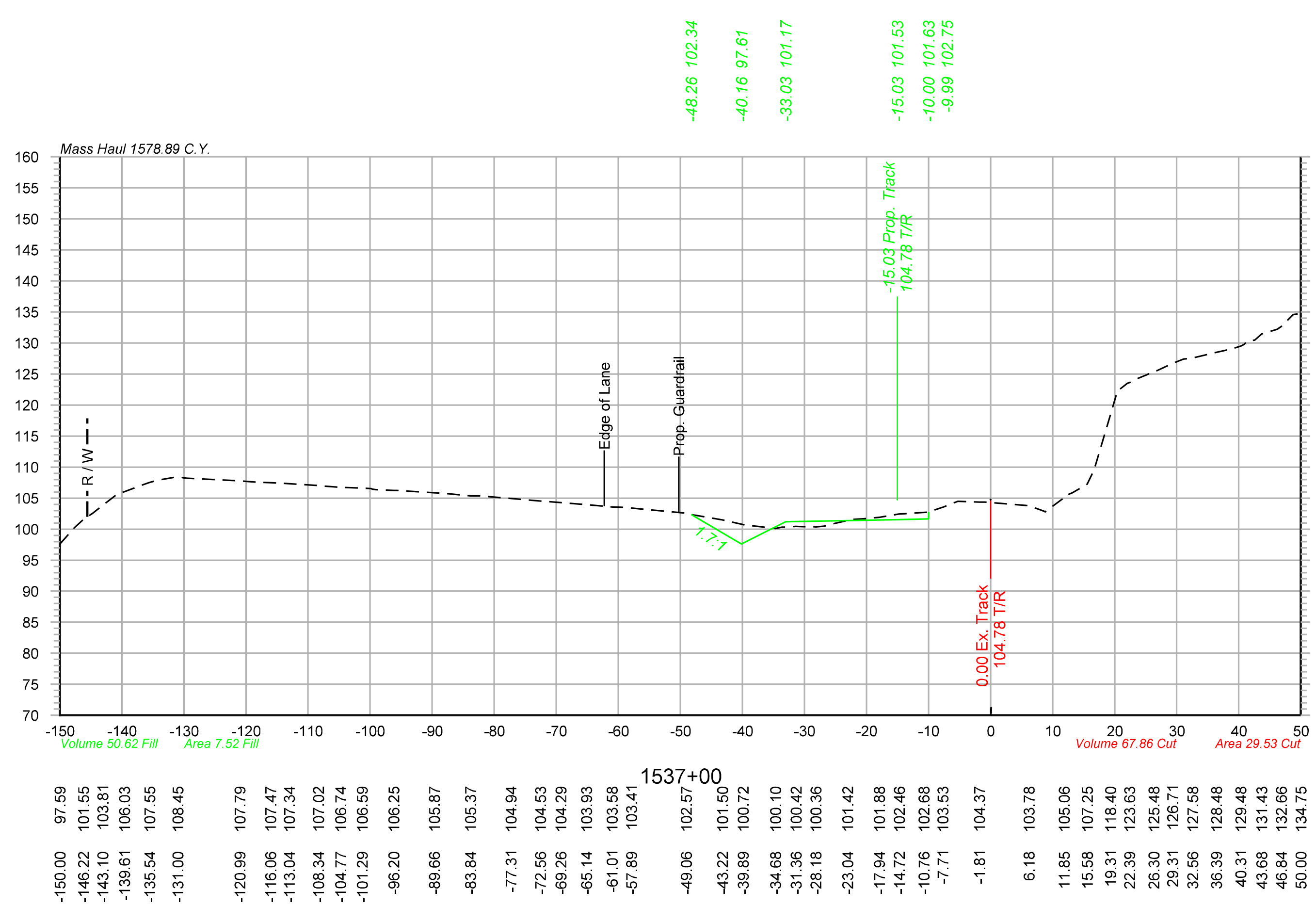
Office of Assistant Vice President
Engineering Design/Construction

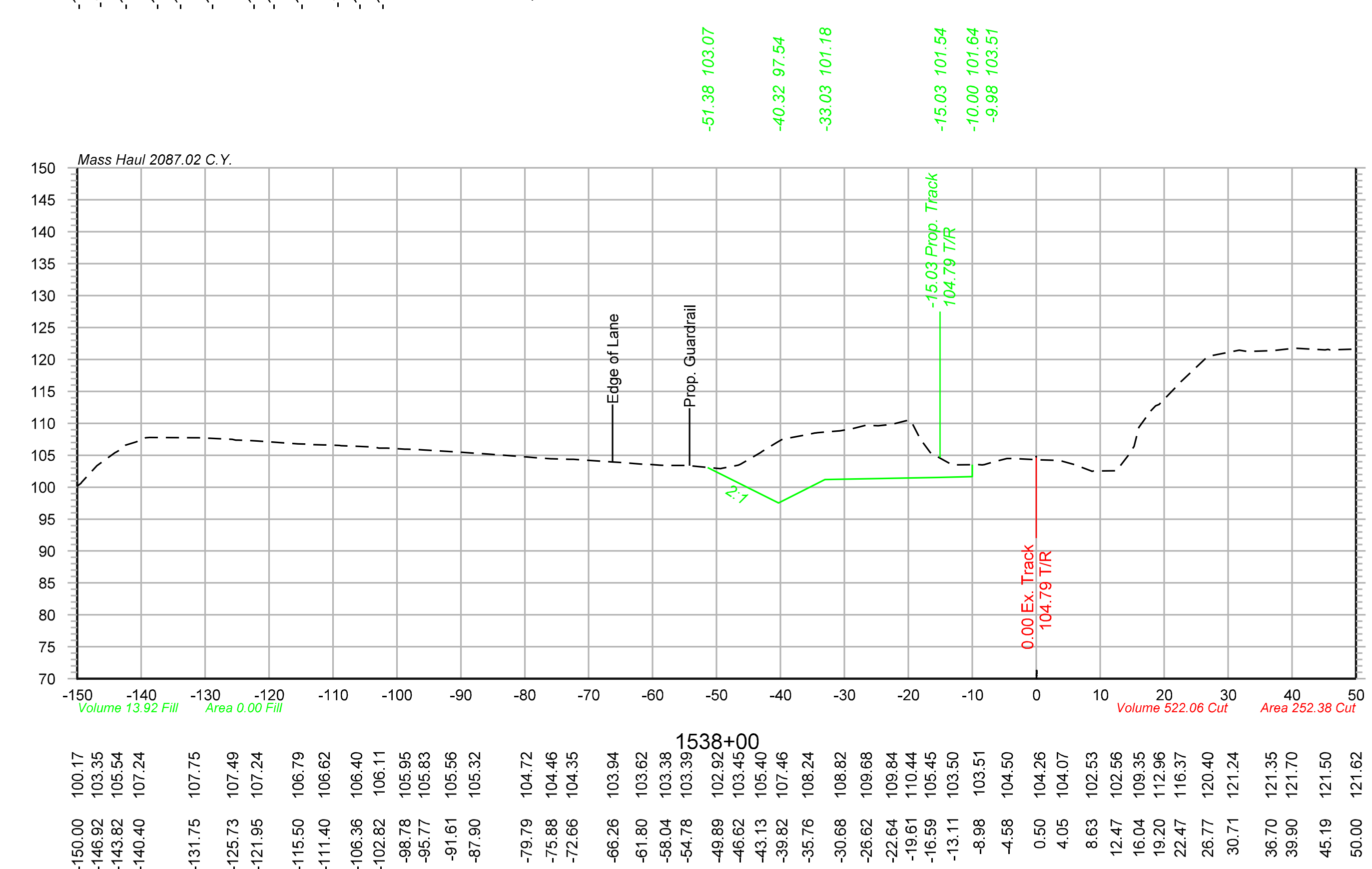
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1536+00 TO STA.1536+18

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omha65573\jparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



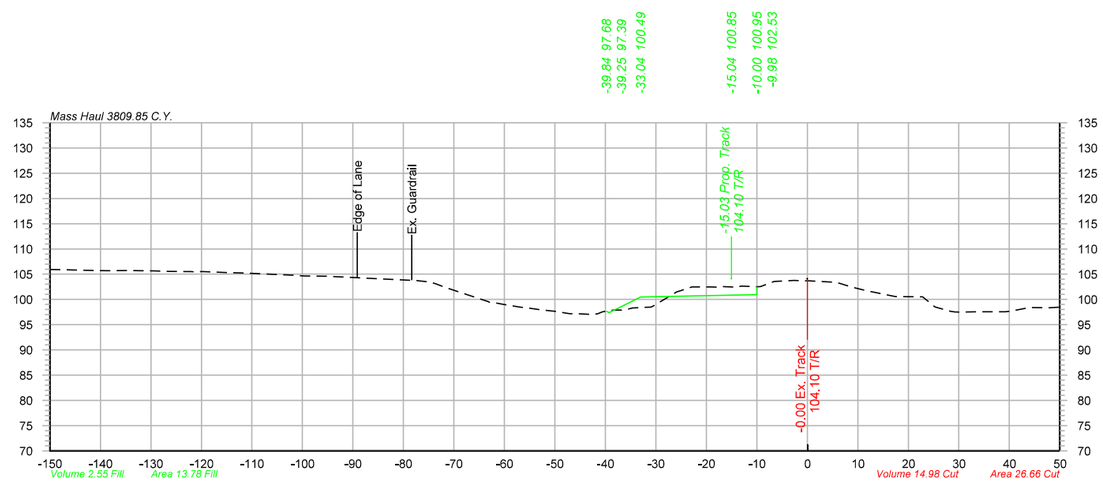




Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

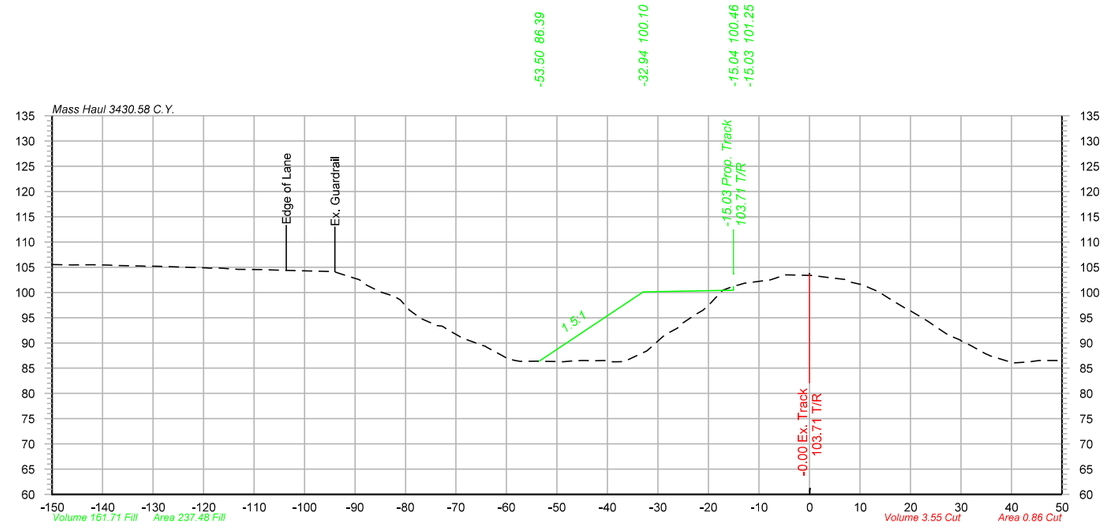
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD	Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline	
DATE: 10/20/2014		
SHEET NUMBER X 033 of 139	SHEET TITLE: CROSS SECTIONS STA.1537+00 TO STA.1539+00	



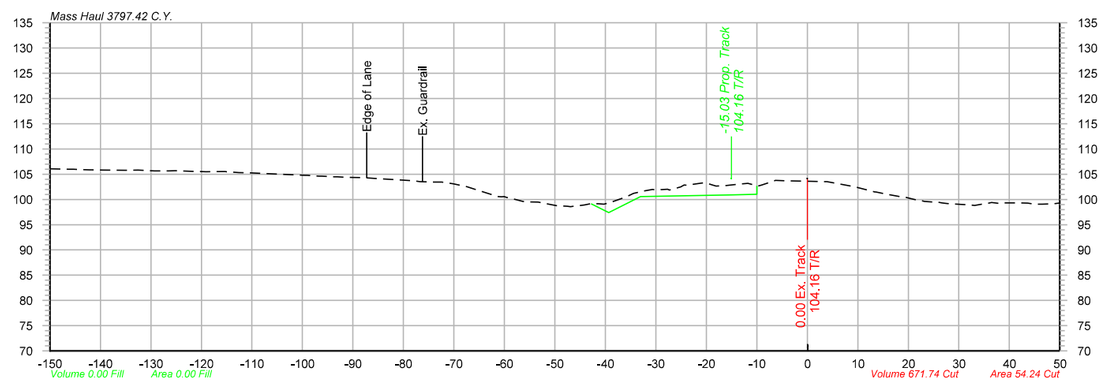
1540+10

-150.00	105.94
-146.99	105.89
-142.88	105.77
-138.69	105.70
-134.72	105.75
-131.28	105.67
-127.02	105.58
-123.20	105.51
-119.78	105.51
-114.73	105.31
-109.47	105.14
-102.16	104.81
-95.98	104.60
-89.13	104.31
-81.66	103.95
-77.19	103.74
-73.37	103.00
-67.33	100.92
-63.17	99.55
-57.11	98.51
-52.70	97.94
-48.92	97.50
-44.75	97.12
-41.60	97.12
-38.40	97.90
-34.61	98.29
-30.98	98.49
-25.85	101.51
-19.35	102.49
-14.06	102.42
-10.00	102.53
-6.59	103.57
-2.60	103.75
4.11	103.49
8.68	102.49
11.87	101.68
16.46	100.77
22.78	100.53
28.39	97.64
31.52	97.50
35.55	97.57
39.25	97.58
43.93	98.39
47.95	98.36



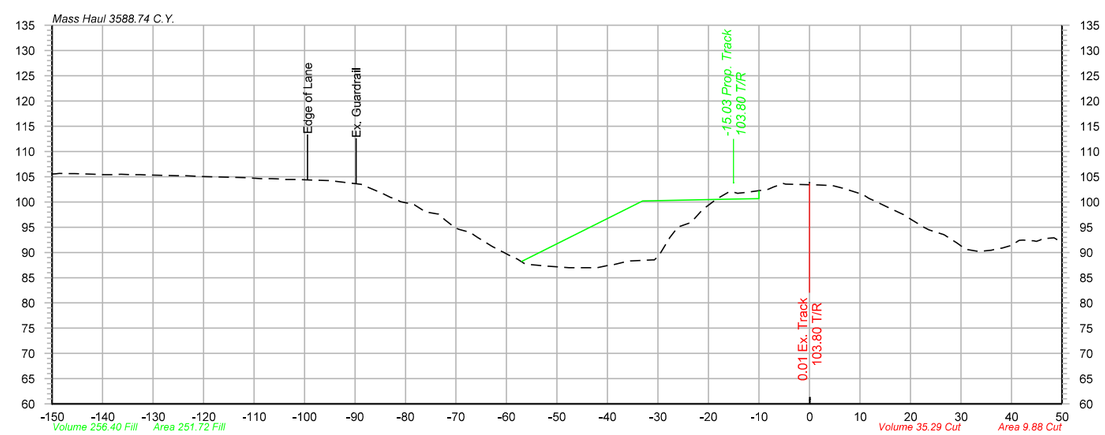
1540+80

-150.00	105.54
-146.28	105.44
-142.08	105.47
-138.42	105.39
-132.20	105.24
-119.41	104.84
-114.93	104.69
-108.42	104.51
-104.86	104.42
-94.96	104.15
-89.14	102.51
-85.83	100.52
-82.63	99.35
-79.33	96.59
-73.81	93.49
-68.88	91.07
-64.63	89.49
-60.88	87.51
-57.31	86.37
-53.01	86.39
-49.61	86.29
-46.06	86.49
-42.51	86.50
-39.10	86.26
-35.55	86.85
-32.25	88.39
-28.97	91.29
-25.67	93.55
-22.43	95.71
-17.17	100.45
-12.92	101.80
-7.81	102.47
-4.78	103.50
0.61	103.34
3.84	102.95
7.08	102.56
10.34	101.51
13.68	100.17
17.12	97.97
20.34	96.15
23.67	94.15
27.19	91.79
31.88	89.52
35.14	87.72
39.77	86.21
43.33	86.23
46.86	86.51
50.00	86.58



1540+00

-150.00	106.07
-146.45	106.00
-142.19	105.86
-135.17	105.76
-129.33	105.66
-125.15	105.69
-120.85	105.53
-115.97	105.51
-112.61	105.32
-99.48	104.79
-96.19	104.60
-93.05	104.48
-87.68	104.30
-77.92	103.71
-73.96	103.45
-70.16	103.09
-66.01	102.06
-61.91	100.79
-58.70	100.21
-53.39	99.50
-49.72	98.78
-46.33	98.64
-42.94	99.13
-39.17	99.35
-35.81	100.52
-32.48	101.63
-29.22	101.90
-25.08	102.47
-21.01	103.21
-16.26	102.71
-12.21	103.15
-9.01	102.86
-4.24	103.71
0.02	103.61
3.48	103.54
8.38	102.71
13.06	101.57
18.30	100.55
21.61	99.88
25.00	99.47
30.37	99.04
35.75	98.27
40.95	99.31
44.95	99.08
48.83	99.15



1540+62

-150.00	105.52
-146.43	105.62
-141.70	105.50
-137.93	105.40
-134.34	105.40
-125.30	105.19
-120.18	105.02
-112.03	104.81
-108.64	104.63
-104.28	104.54
-100.32	104.41
-96.77	104.29
-88.76	103.50
-84.55	101.67
-81.05	100.08
-76.01	98.02
-72.22	96.50
-67.23	93.99
-62.75	91.15
-59.56	89.49
-56.46	87.83
-51.85	87.29
-47.66	86.97
-42.02	86.96
-36.63	88.10
-31.08	88.51
-27.61	93.00
-23.67	95.85
-19.68	99.60
-15.87	102.01
-12.41	101.90
-8.22	102.50
-5.18	103.64
1.83	103.35
6.69	102.69
10.01	101.67
15.25	99.09
18.55	97.54
22.68	94.99
26.62	93.52
30.57	90.89
33.92	90.26
37.24	90.71
41.28	92.22
44.39	92.31
48.43	92.88

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omha55173\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

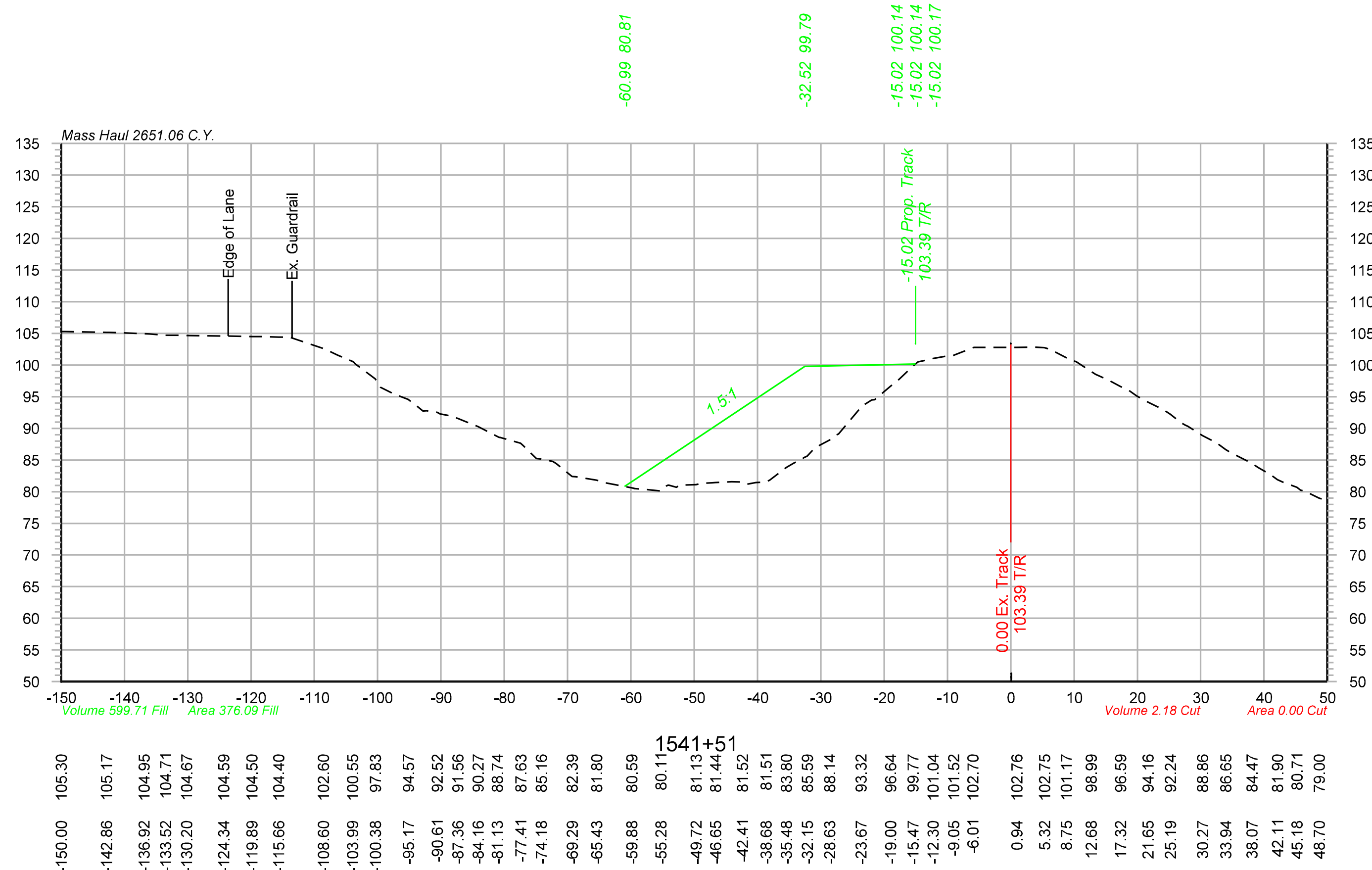
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 034 of 139

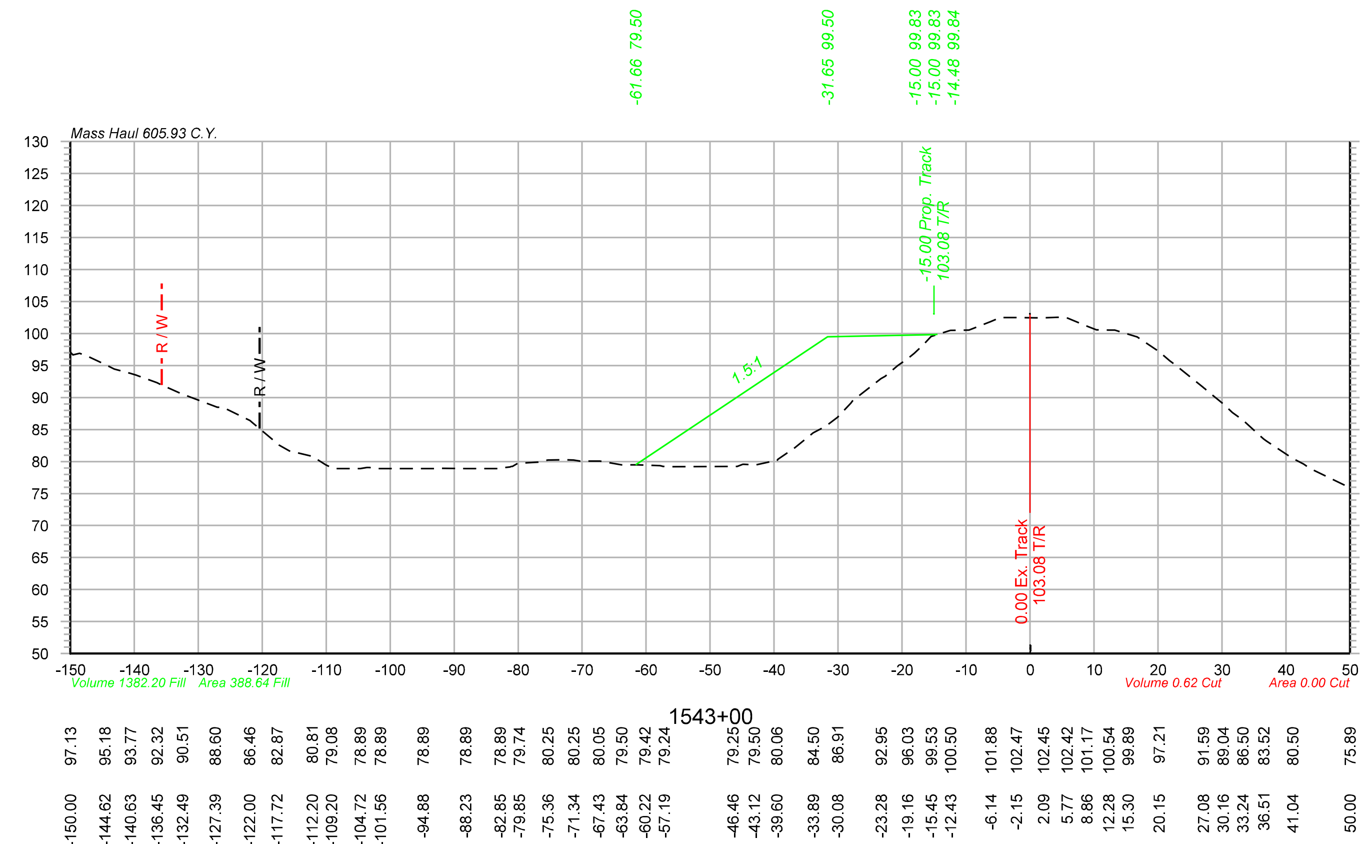
UNION PACIFIC RAILROAD

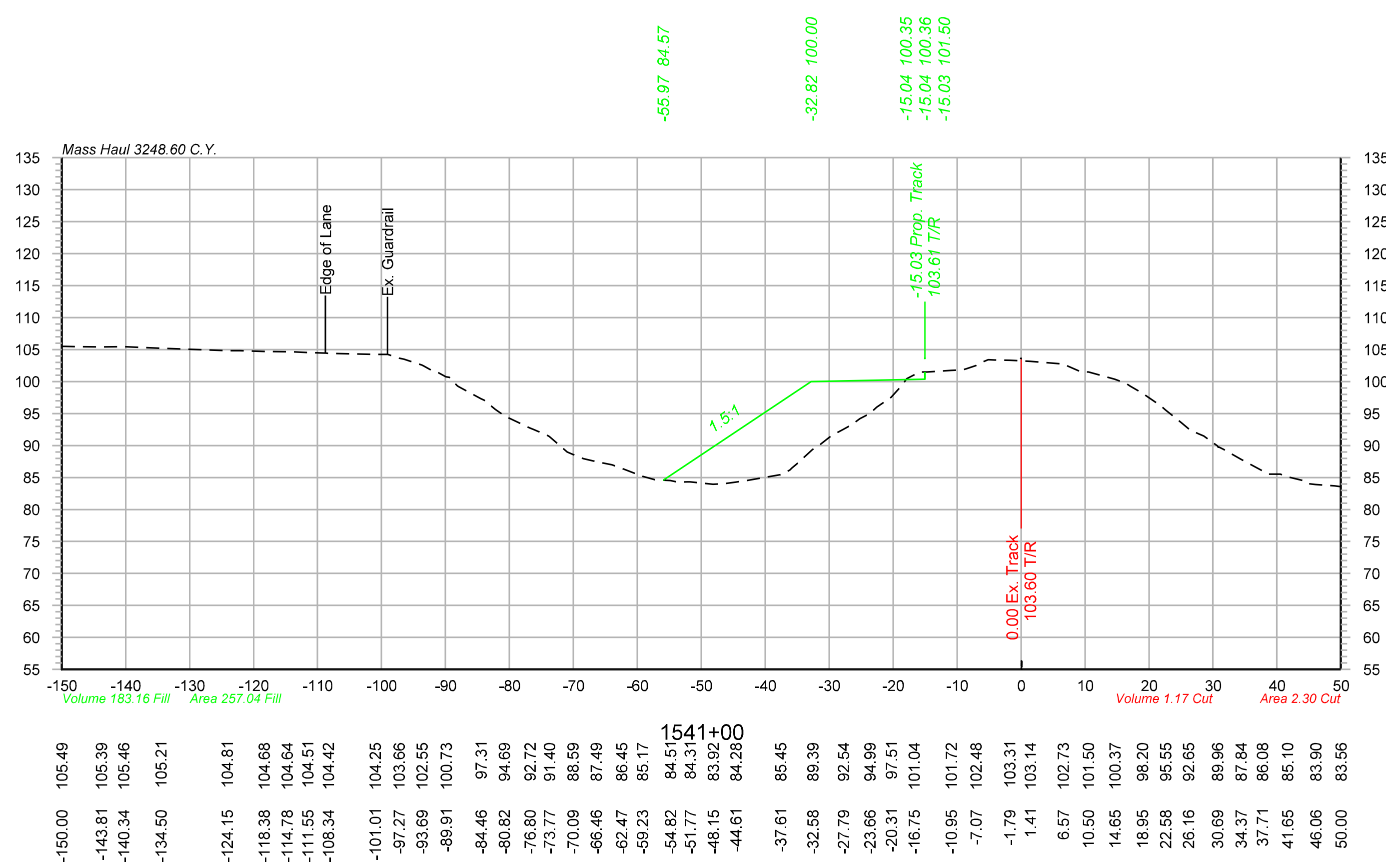
Office of Assistant Vice President
Engineering Design/Construction

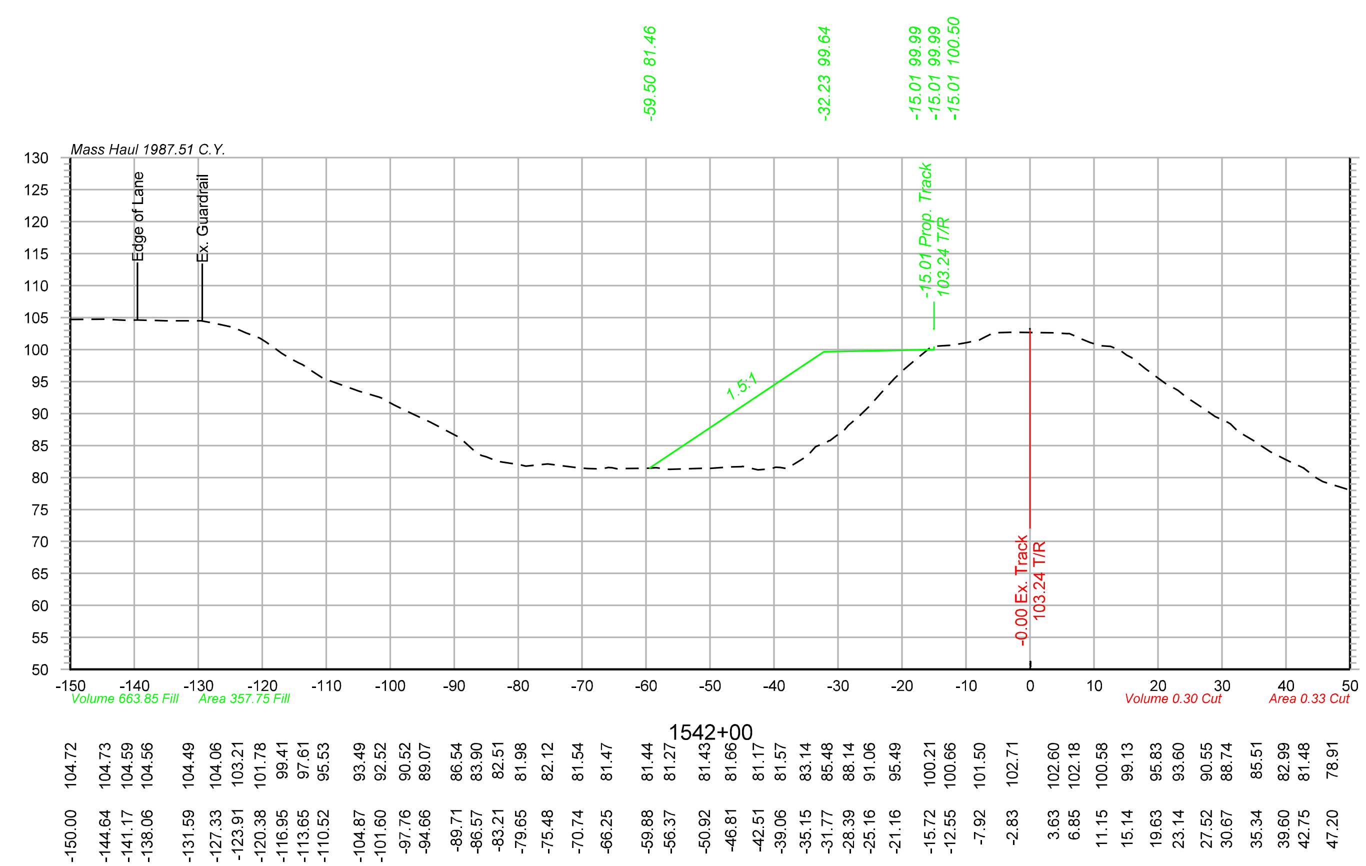
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1540+00 TO STA.1540+80









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 035 of 139

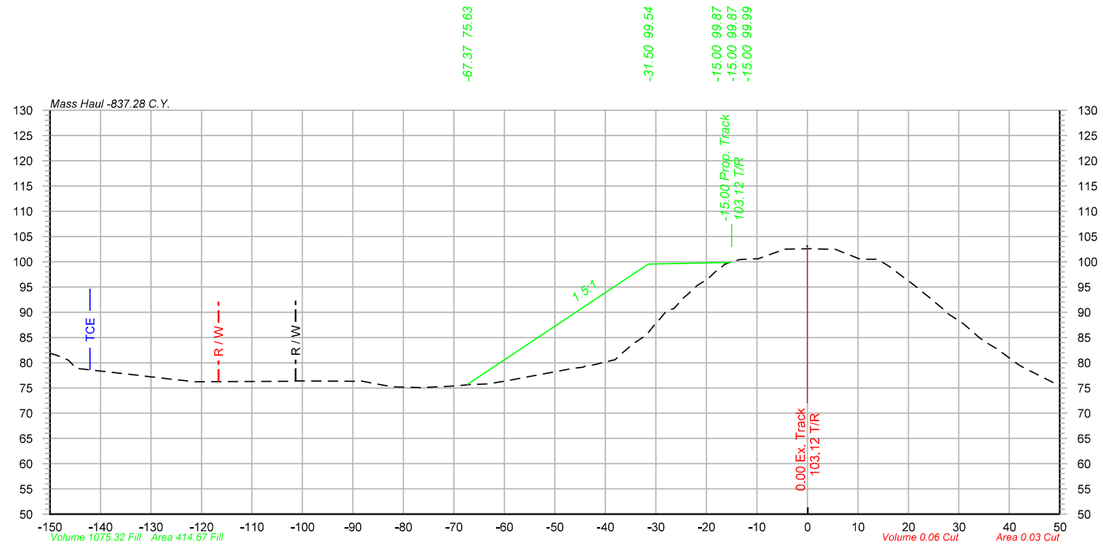
UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

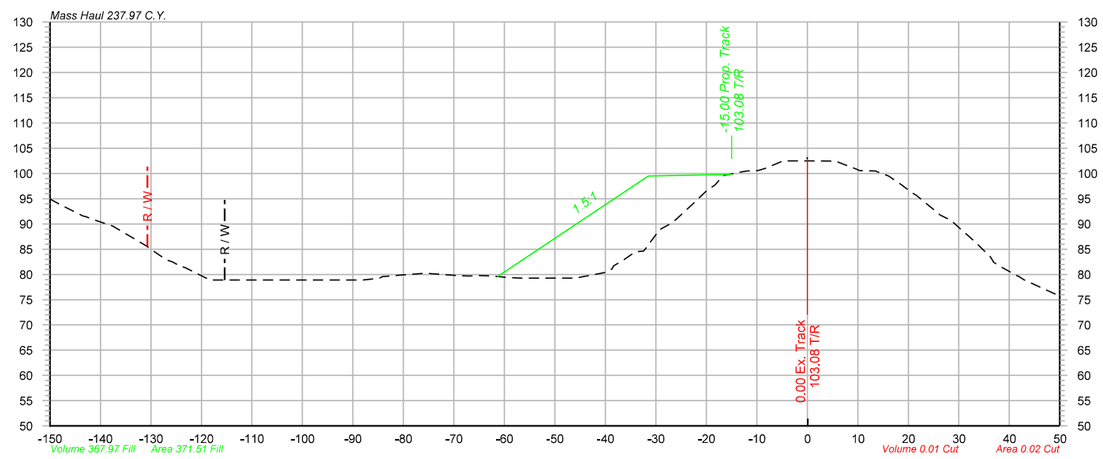
SHEET TITLE:
CROSS SECTIONS STA.1541+00 TO STA.1543+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



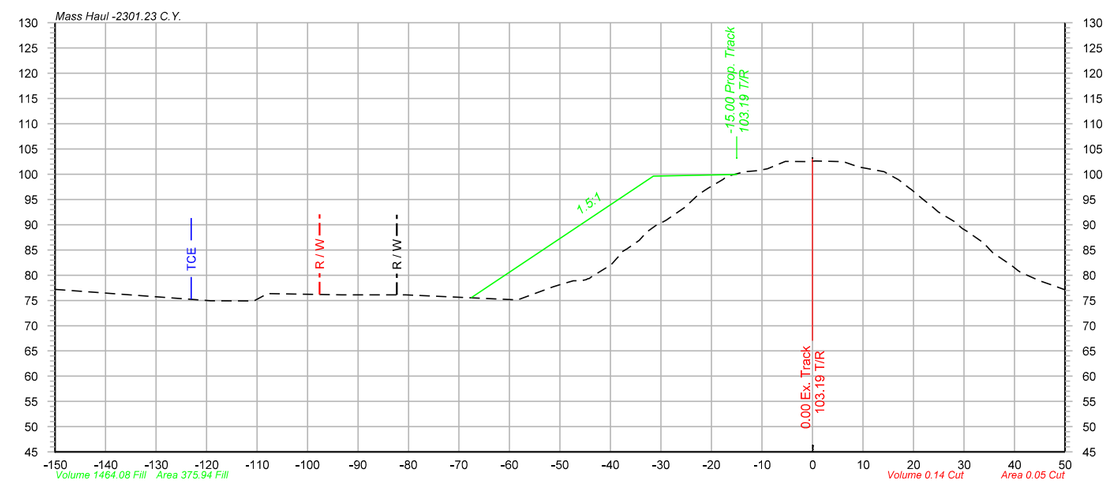
1544+00

-150.00	81.87
-146.98	80.81
-140.51	78.41
-133.35	77.59
-129.97	77.20
-125.68	76.71
-122.31	76.33
-101.93	76.32
-89.33	76.33
-82.31	75.21
-76.61	75.08
-69.62	75.40
-65.79	75.79
-61.17	76.15
-46.30	78.89
-43.06	79.42
-38.43	80.50
-34.41	83.82
-29.83	88.07
-26.42	90.72
-21.83	95.27
-17.65	98.53
-13.23	100.44
-9.73	100.59
-5.34	102.16
-1.51	102.54
4.96	102.46
8.00	101.50
11.22	100.54
14.64	100.02
19.22	96.79
23.28	93.61
27.31	90.28
30.75	87.80
34.08	84.93
37.91	82.50
41.25	80.04
48.69	76.06



1543+26

-150.00	94.94
-143.45	91.56
-137.75	89.66
-134.17	87.57
-130.98	85.71
-126.94	82.90
-123.94	81.53
-118.88	79.21
-110.42	78.89
-106.16	78.89
-99.89	78.89
-90.14	78.89
-85.29	79.20
-77.36	80.10
-72.19	79.96
-69.18	79.77
-65.52	79.72
-60.97	79.55
-56.97	79.28
-46.01	79.26
-40.05	80.40
-36.43	82.84
-32.51	84.63
-29.49	88.73
-25.98	90.88
-22.66	94.00
-18.37	97.64
-13.43	100.23
-9.80	100.57
-5.50	102.20
0.46	102.50
5.44	102.43
9.39	101.00
13.35	100.49
18.58	97.76
21.60	95.64
26.34	91.73
30.42	88.91
33.52	86.13
36.57	82.96
41.40	79.81
48.01	76.63



1545+00

-150.00	77.20
-119.19	74.95
-110.62	74.91
-93.23	76.12
-80.56	76.10
-58.41	75.12
-51.39	77.68
-47.34	78.89
-44.18	79.37
-39.91	82.08
-36.76	85.17
-32.85	88.53
-29.02	90.85
-25.26	93.46
-21.80	96.48
-17.66	99.00
-13.43	100.47
-8.91	101.08
-5.87	102.33
-0.65	102.50
5.70	102.51
9.09	101.44
14.21	100.51
19.19	97.22
22.72	94.36
28.05	90.66
33.78	86.46
38.43	82.63
42.63	79.96
47.26	78.09

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 036 of 139

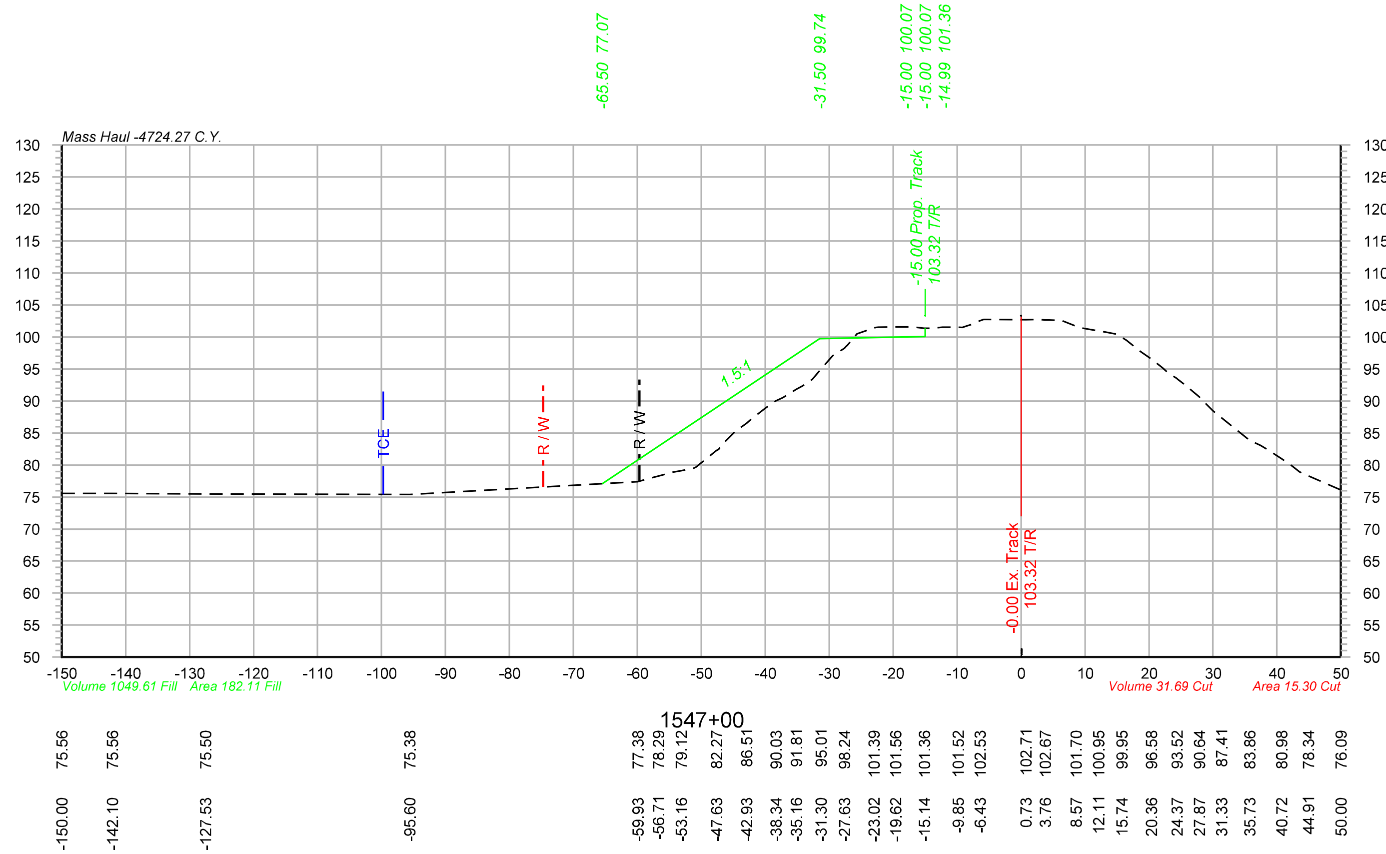
UNION PACIFIC RAILROAD

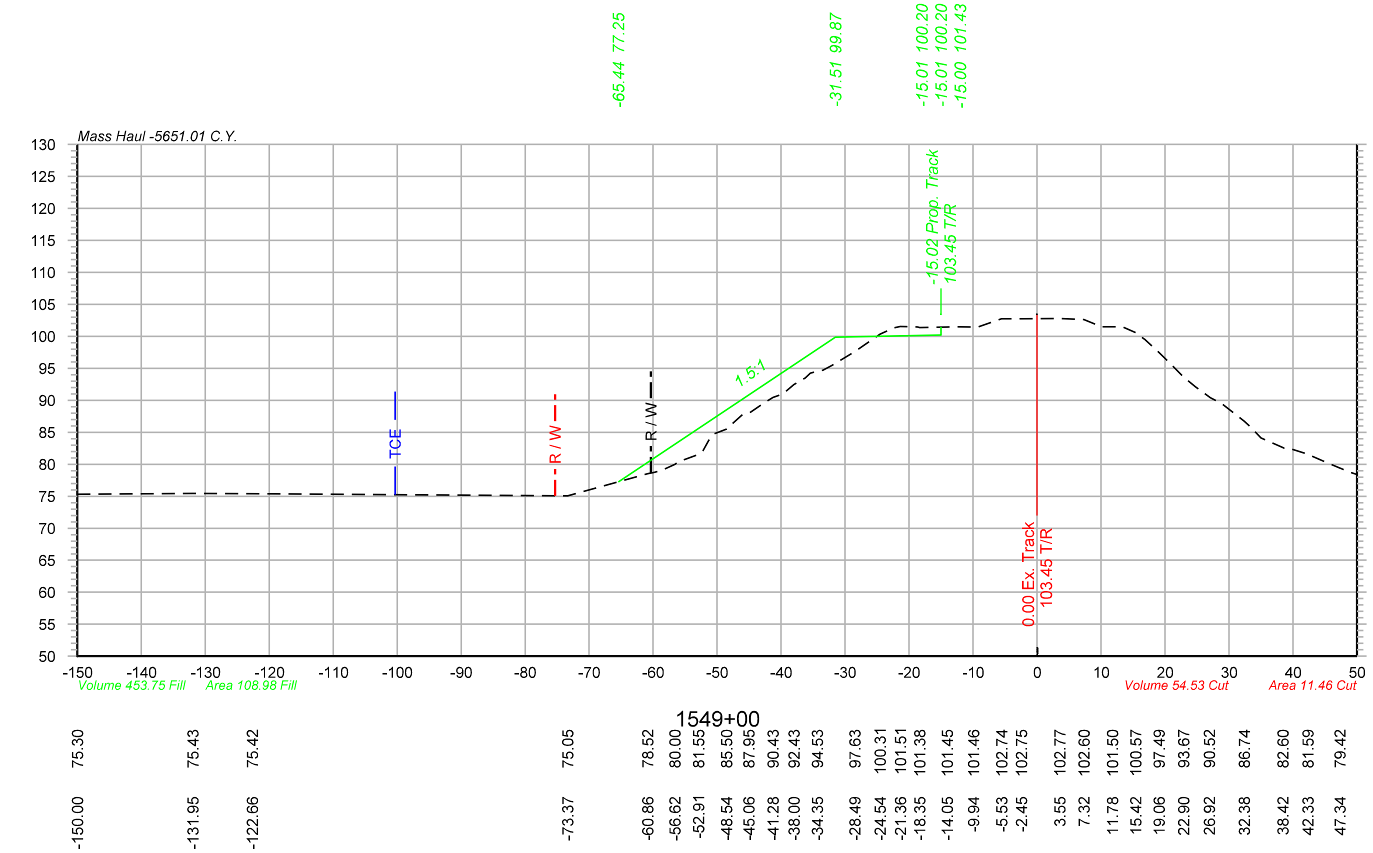
Office of Assistant Vice President
Engineering Design/Construction

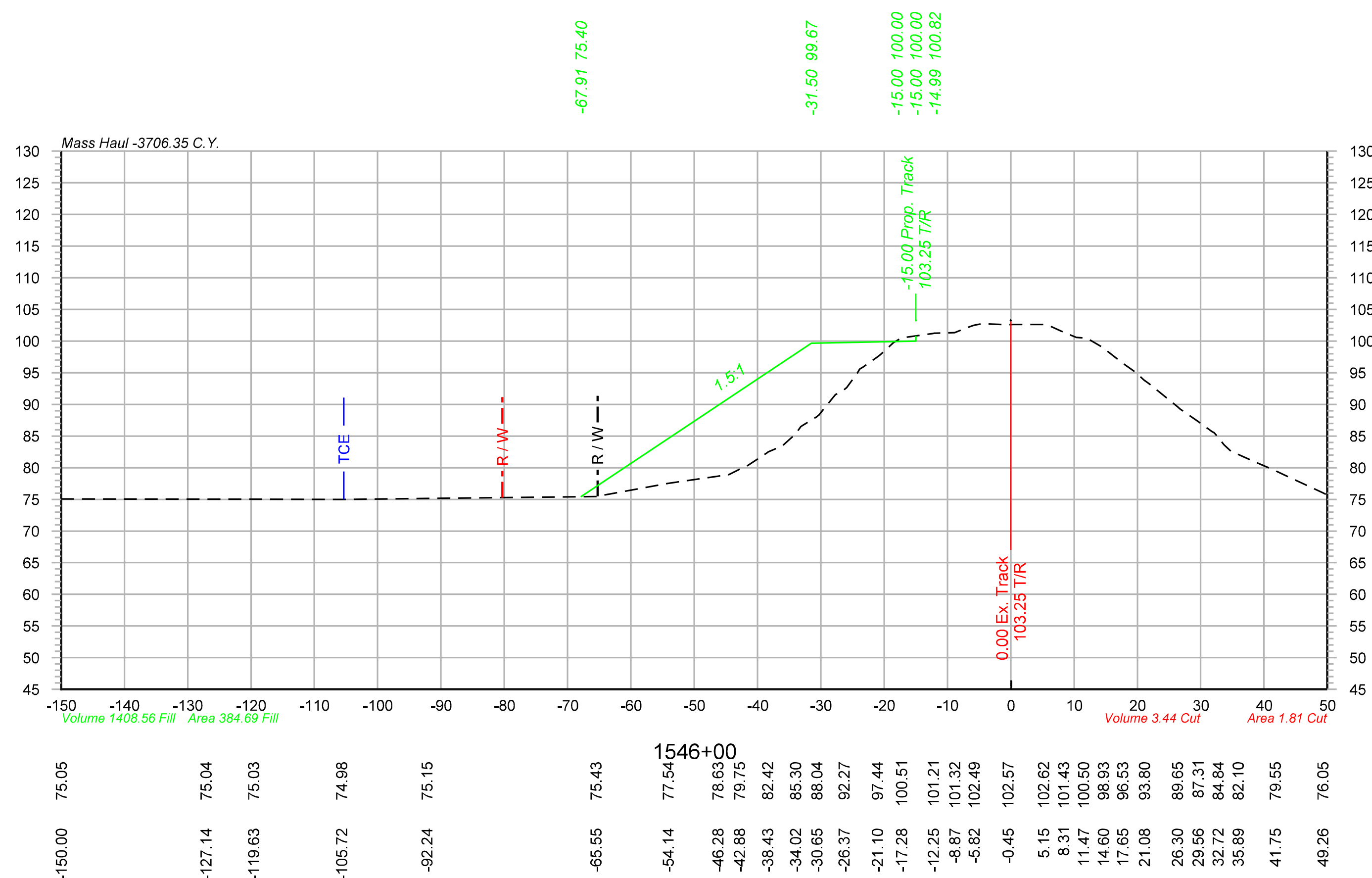
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

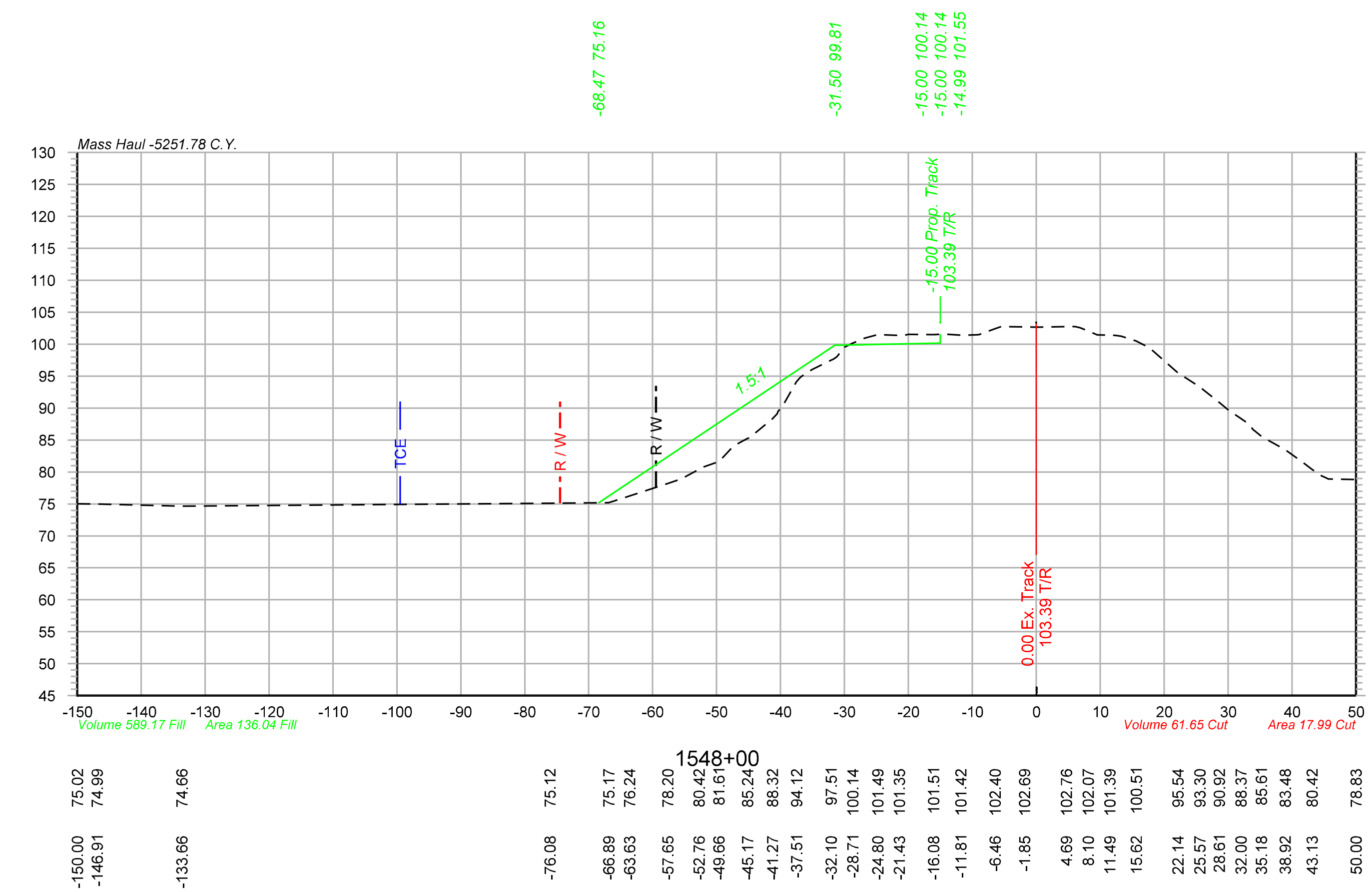
SHEET TITLE:
CROSS SECTIONS STA.1543+26 TO STA.1545+00

Color table: F:\PROJECTS\OII-I345\color\UPRR.tbl
\\omhe5573\ipgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\OII-I345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014







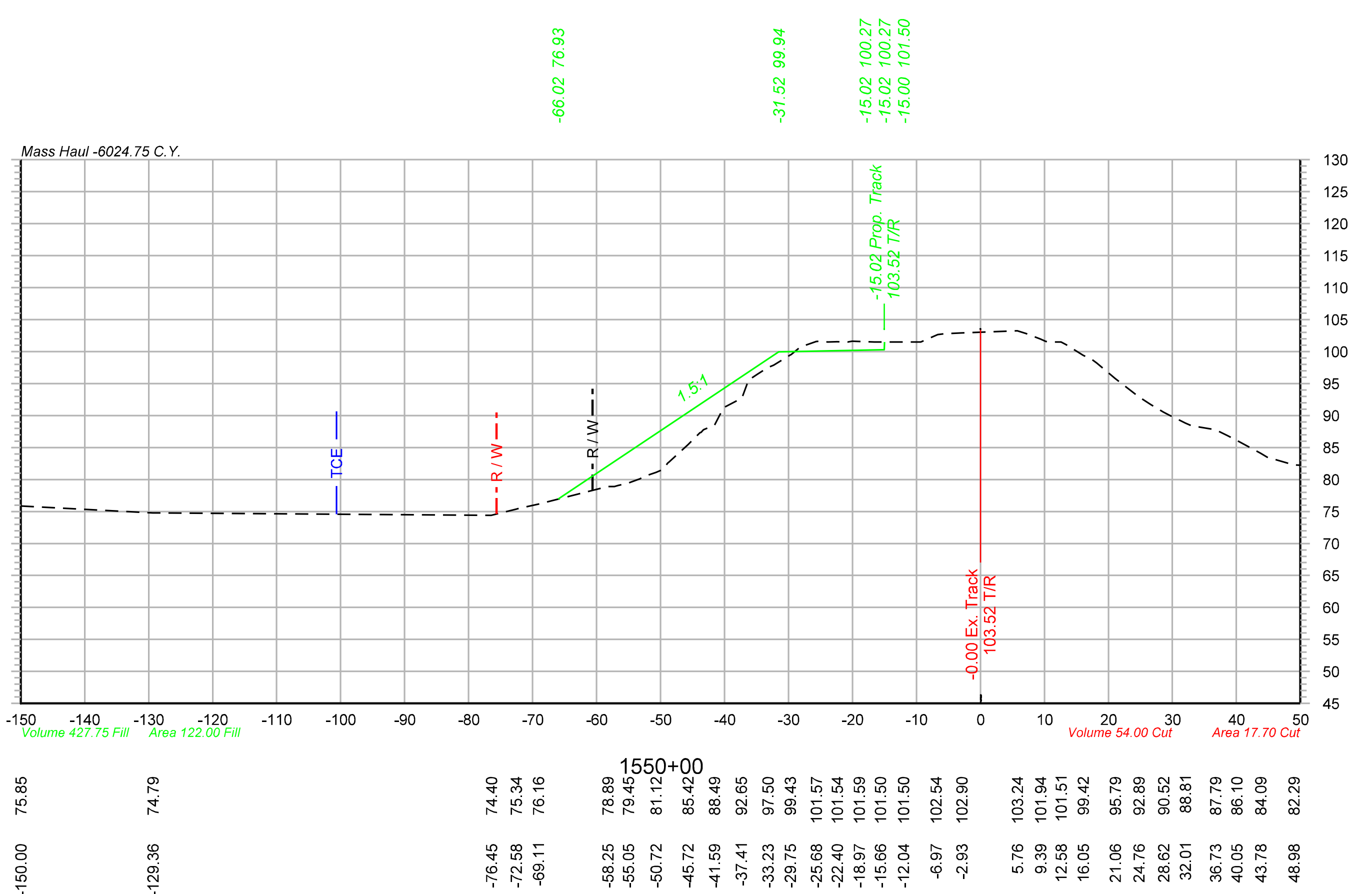


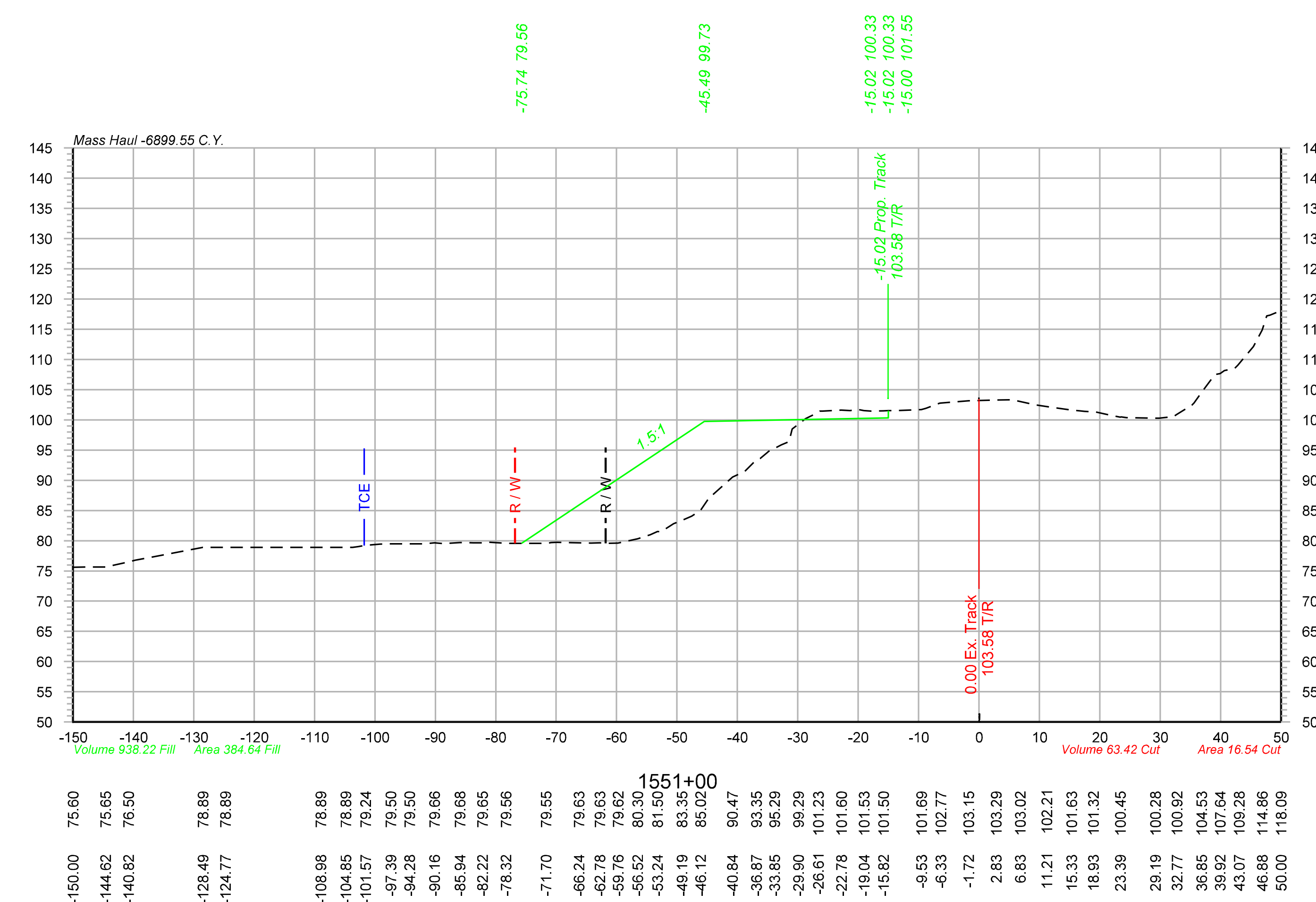
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 037 of 139	SHEET TITLE: CROSS SECTIONS STA.1546+00 TO STA.1549+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





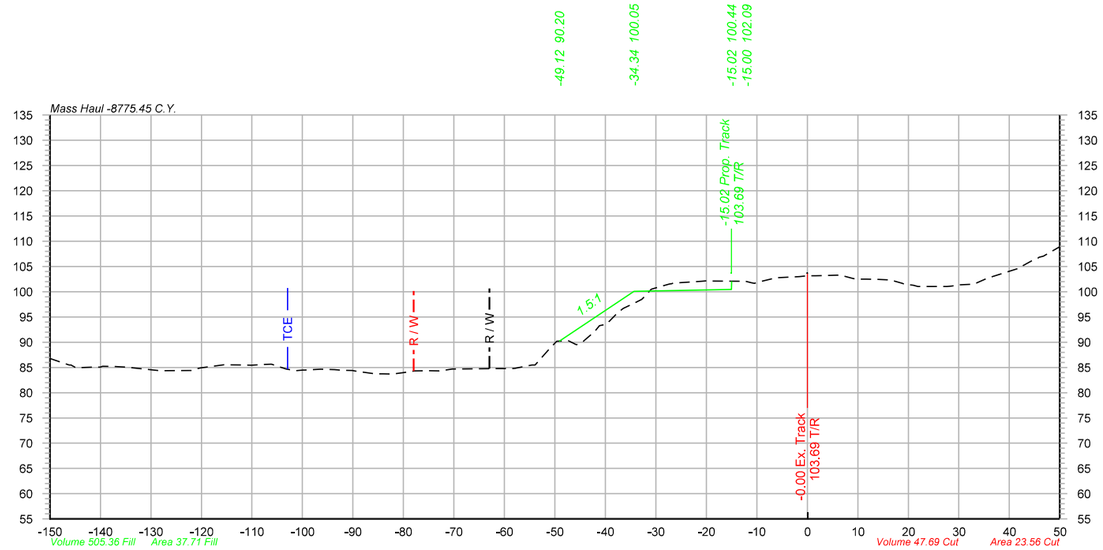
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 038 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

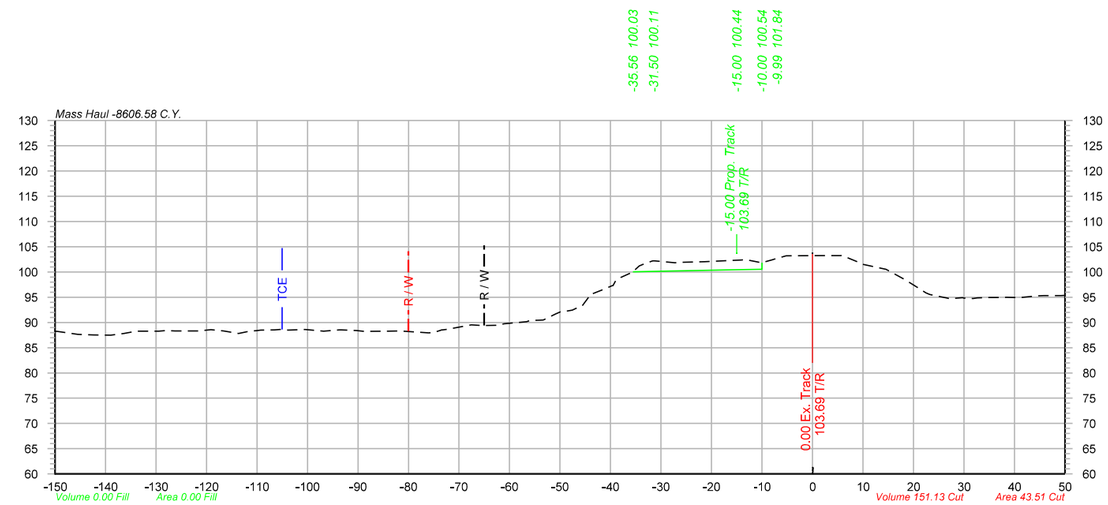
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1550+00 TO STA.1551+00



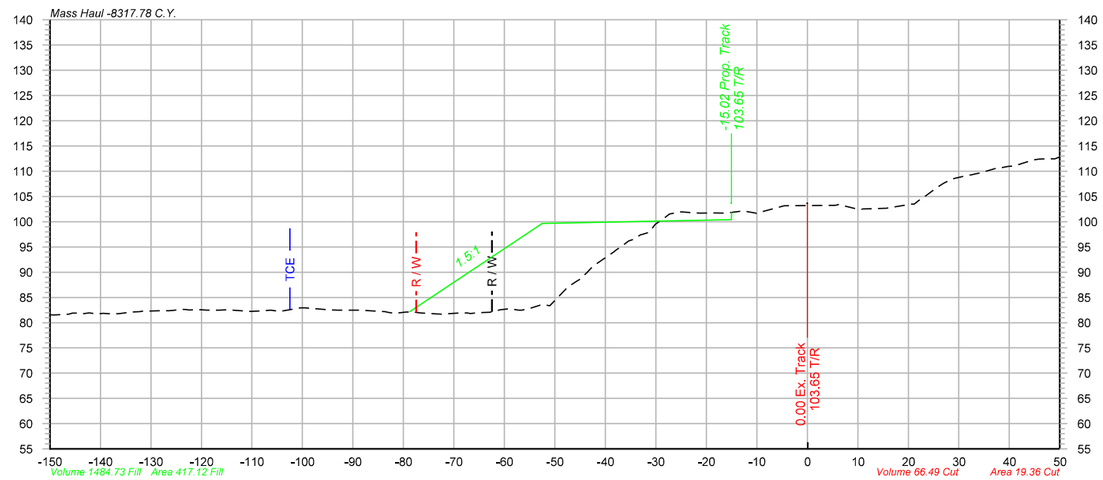
1552+60

-150.00	86.76
-146.20	85.47
-141.53	85.06
-137.23	85.17
-128.25	84.35
-121.84	84.38
-115.55	85.53
-111.39	85.50
-107.28	85.60
-103.22	84.71
-99.86	84.47
-96.38	84.66
-92.15	84.44
-85.61	83.73
-82.14	83.68
-77.71	84.32
-72.95	84.33
-69.33	84.67
-61.64	84.79
-58.53	84.78
-54.55	85.49
-51.33	88.38
-47.31	90.26
-42.14	92.10
-37.62	95.76
-34.56	97.58
-30.93	100.48
-27.30	101.55
-20.86	102.07
-13.50	102.08
-10.49	101.66
-6.96	102.58
-1.56	103.01
1.63	103.16
6.14	103.27
9.45	102.52
13.42	102.45
16.50	102.30
20.96	101.28
27.64	101.03
32.88	101.49
36.64	102.98
42.20	104.75
45.56	106.58
50.00	108.91



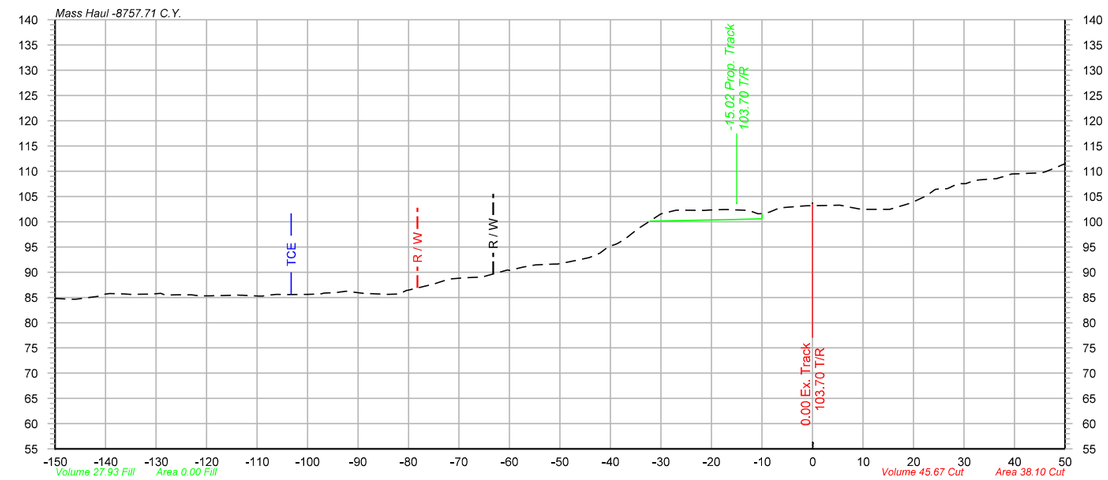
1554+00

-150.00	88.23
-145.56	87.63
-142.33	87.51
-139.01	87.47
-133.88	88.29
-129.45	88.28
-126.26	88.32
-121.60	88.33
-116.61	88.32
-111.66	88.24
-106.52	88.52
-100.47	88.61
-96.84	88.29
-93.72	88.51
-90.34	88.38
-84.06	88.28
-76.05	87.95
-72.27	88.65
-67.55	89.51
-62.43	89.44
-56.60	90.14
-53.31	90.47
-49.87	92.12
-45.98	93.19
-41.45	96.54
-35.66	99.93
-32.33	101.94
-27.24	101.84
-21.37	102.04
-16.08	102.30
-11.55	102.09
-7.95	102.41
1.57	103.23
5.58	103.26
8.97	102.00
13.74	100.71
18.30	98.50
22.46	95.86
26.70	94.80
29.71	94.92
35.17	94.93
38.42	94.97
44.68	95.29
48.42	95.34



1552+00

-150.00	81.53
-146.24	81.71
-142.25	81.95
-137.48	81.74
-133.91	82.11
-127.30	82.40
-123.99	82.65
-120.32	82.58
-116.44	82.50
-110.85	82.26
-106.28	82.48
-100.39	82.94
-94.43	82.52
-88.69	82.49
-85.13	82.28
-81.78	81.86
-77.73	82.16
-73.32	81.73
-69.29	81.89
-65.12	81.96
-61.35	82.46
-57.20	82.48
-52.49	83.59
-47.75	86.74
-43.70	89.85
-38.25	94.05
-34.50	96.49
-31.31	97.91
-27.29	101.53
-23.29	101.81
-18.78	101.72
-13.19	102.05
-10.06	101.67
-4.57	103.15
0.50	103.20
4.75	103.23
9.22	102.67
12.97	102.57
16.09	102.74
20.66	103.50
25.86	106.89
30.78	108.97
34.05	109.62
37.23	110.54
40.93	111.05
45.08	112.26
49.05	112.45



1553+00

-150.00	84.80
-146.17	84.63
-141.37	85.22
-137.64	85.75
-131.94	85.65
-128.21	85.48
-122.99	85.54
-119.46	85.31
-114.56	85.43
-109.67	85.25
-106.16	85.61
-99.95	85.62
-96.72	85.85
-92.40	86.22
-88.62	85.76
-84.08	85.61
-80.47	86.35
-75.51	87.52
-72.31	88.52
-68.75	88.88
-65.21	89.10
-62.03	89.99
-57.44	90.99
-51.21	91.60
-45.90	92.51
-42.10	93.79
-38.98	95.51
-35.61	97.77
-30.32	101.37
-26.92	102.29
-21.37	102.23
-17.60	102.42
-13.73	102.27
-9.66	101.62
-6.52	102.74
-1.25	103.14
2.42	103.19
6.26	103.12
9.70	102.44
15.01	102.45
18.38	103.36
22.65	105.13
25.67	106.52
28.71	107.51
31.98	108.13
36.45	108.53
41.96	109.53
45.47	109.69
50.00	111.50

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55173\uprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

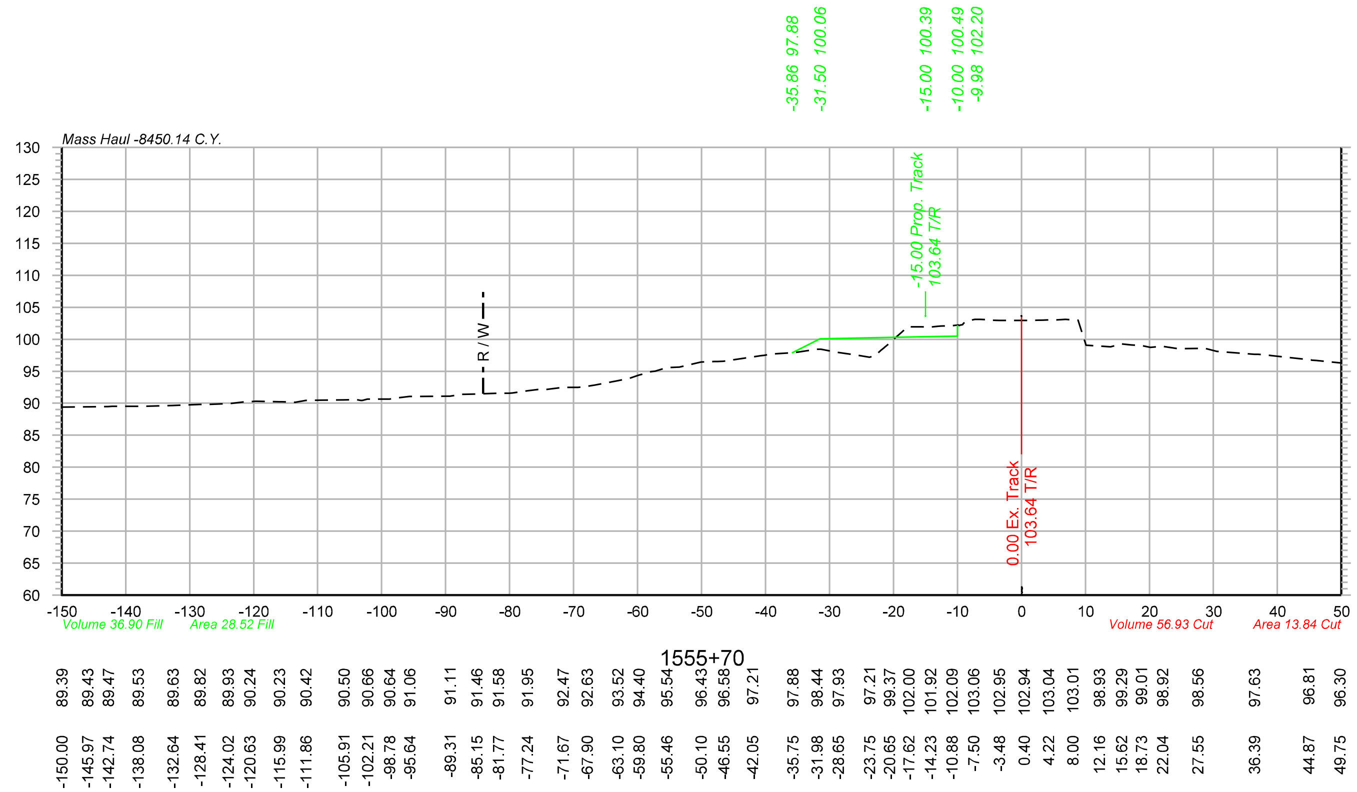
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 039 of 139

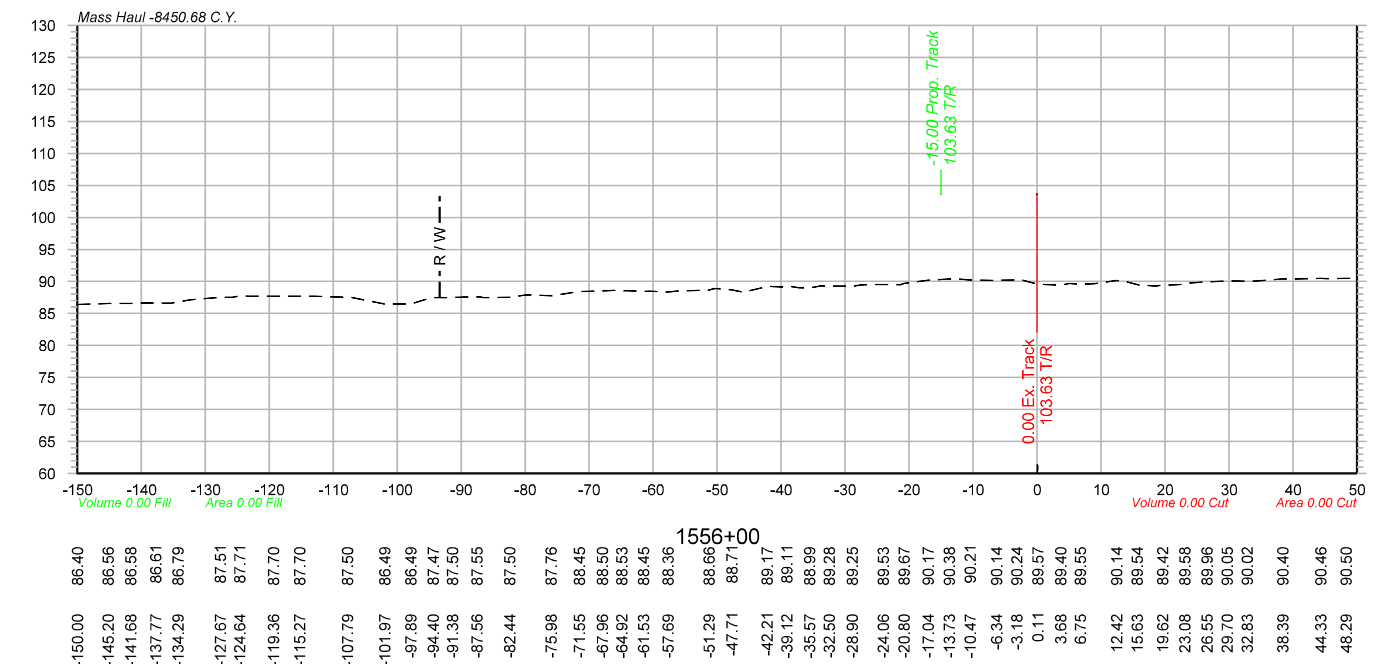
UNION PACIFIC RAILROAD

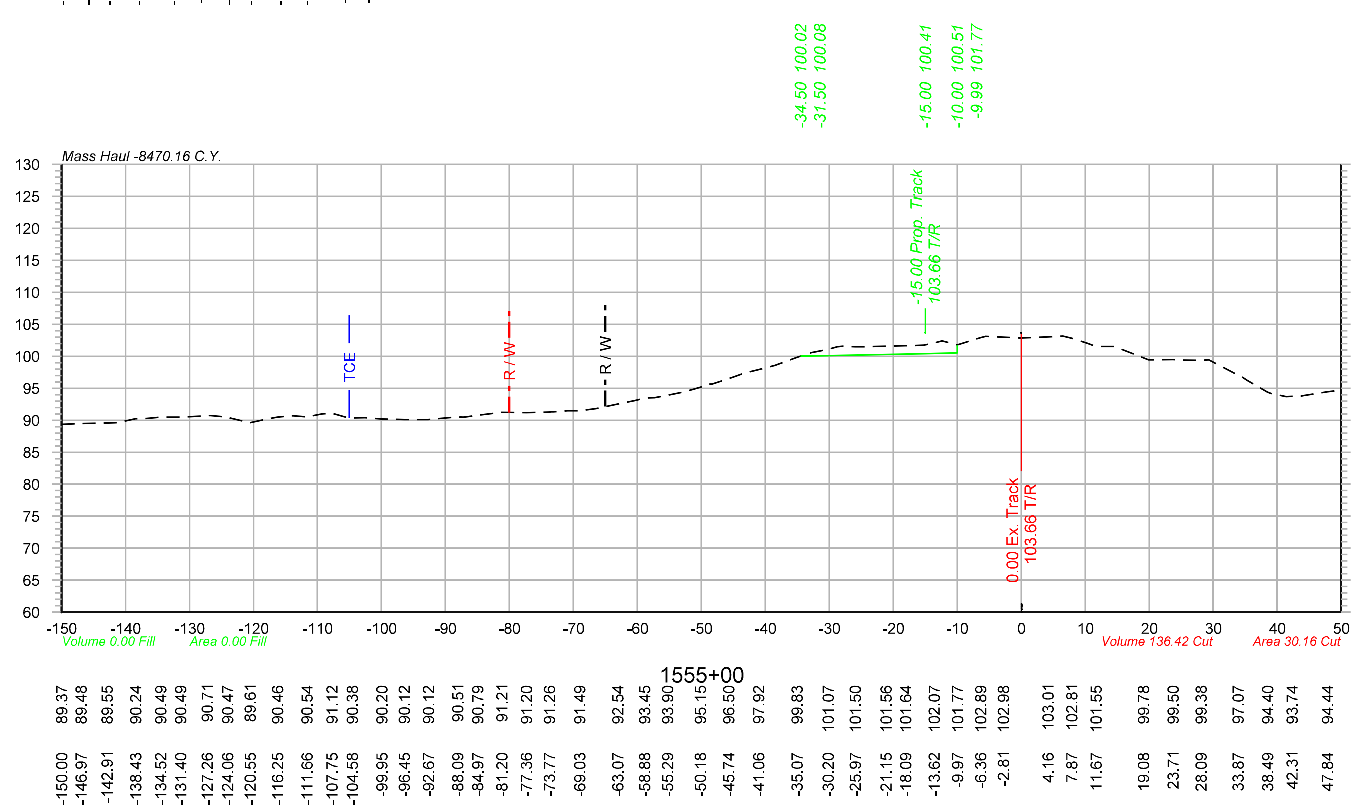
Office of Assistant Vice President
Engineering Design/Construction

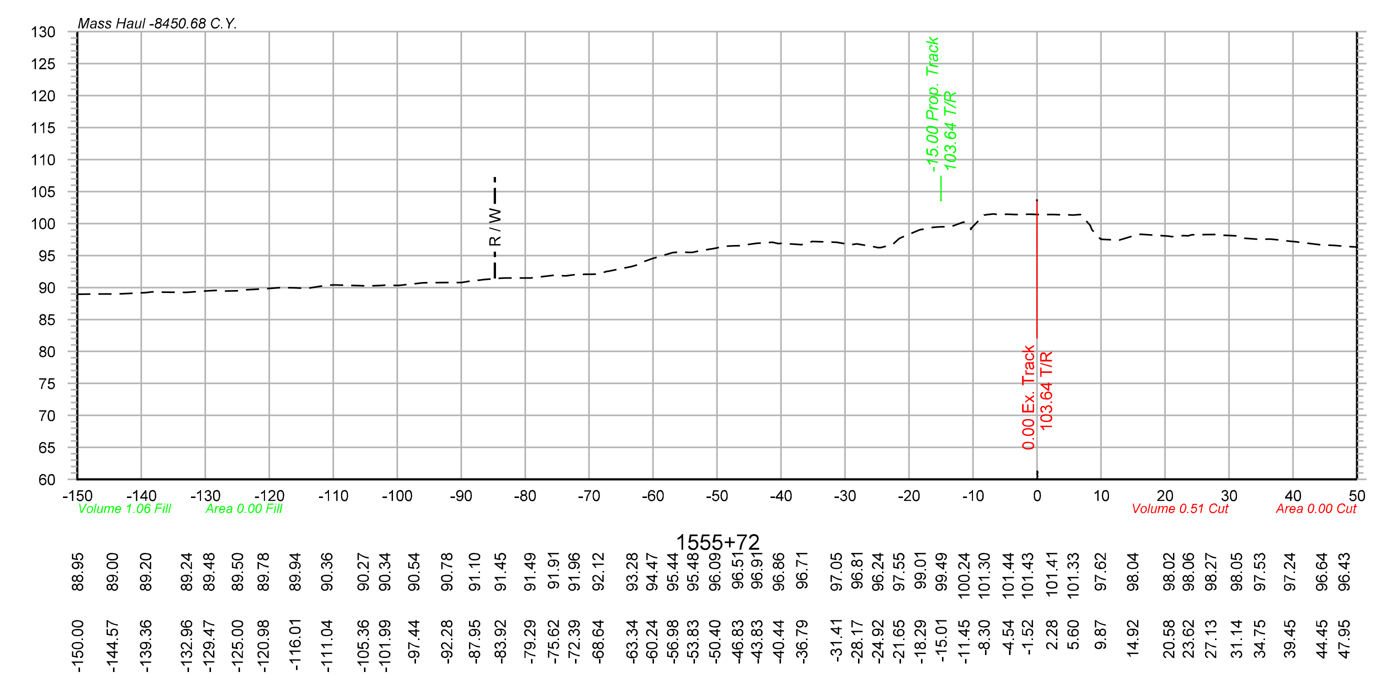
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1552+00 TO STA.1554+00









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

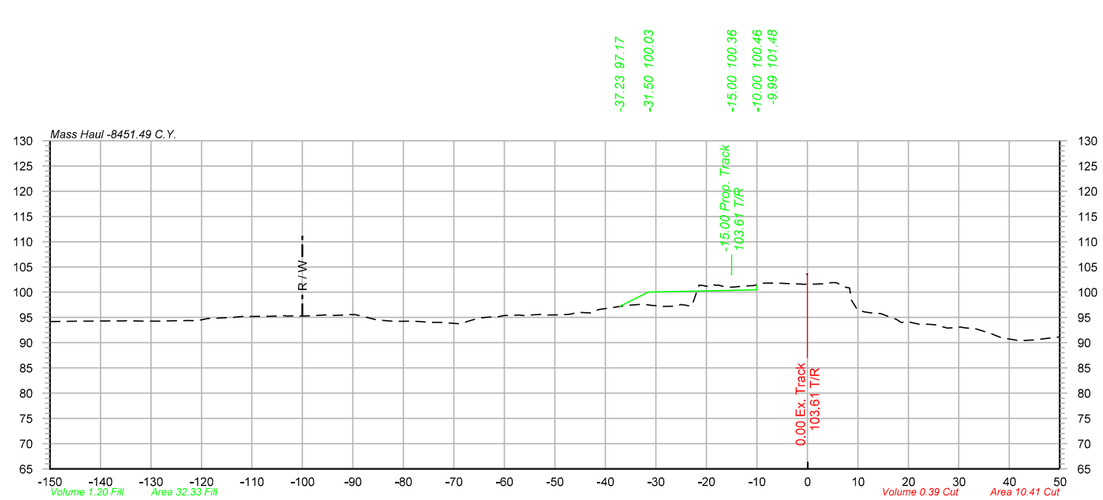
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 040 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

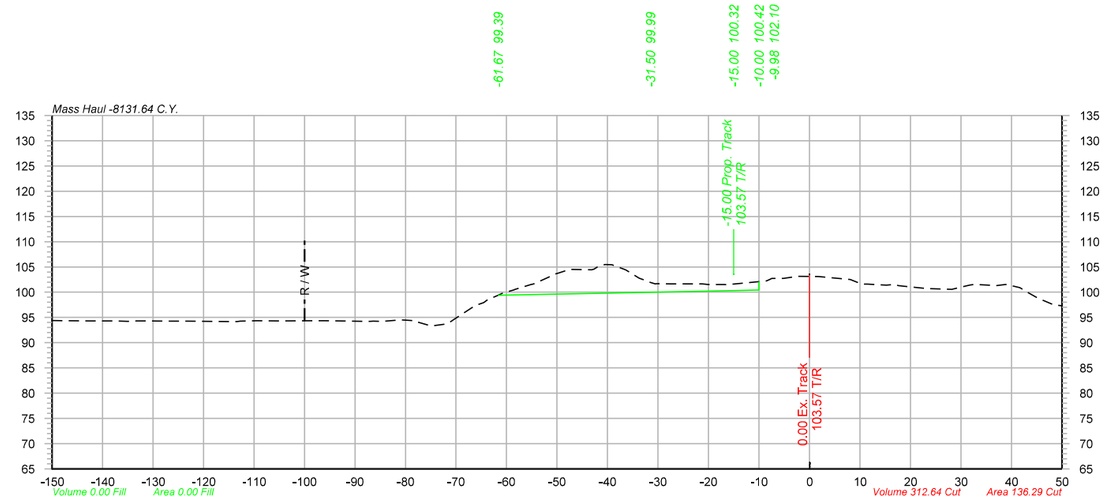
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1555+00 TO STA.1556+00



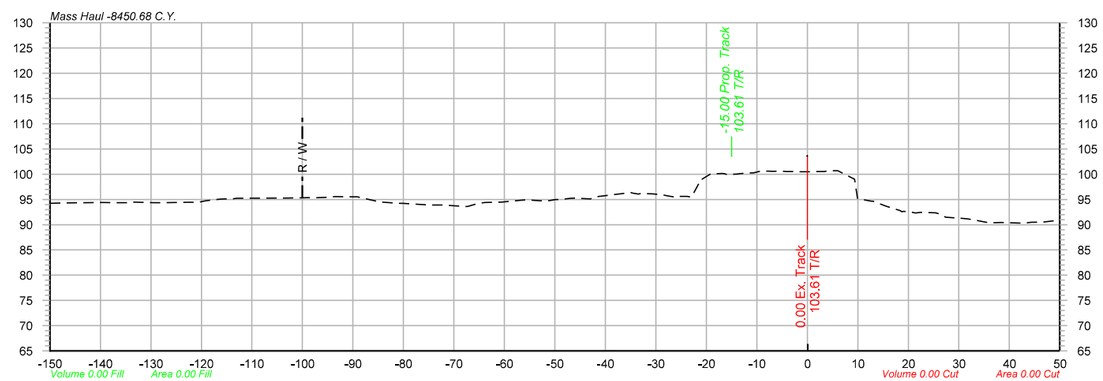
1556+63

-150.00	94.17
-143.93	94.28
-138.17	94.32
-134.92	94.37
-131.43	94.28
-126.88	94.29
-122.49	94.38
-119.19	94.69
-114.16	94.99
-106.45	95.23
-103.11	95.28
-99.92	95.28
-95.66	95.50
-91.84	95.47
-88.06	95.21
-83.78	94.39
-78.02	94.25
-74.41	94.00
-69.13	93.78
-65.06	94.88
-61.41	95.11
-56.94	95.46
-52.83	95.58
-48.70	95.51
-45.57	96.00
-42.49	95.99
-36.52	97.27
-32.77	97.60
-28.86	97.19
-25.64	97.21
-21.43	101.38
-18.35	101.44
-14.54	101.01
-11.50	101.28
-7.93	101.82
-3.43	101.68
0.25	101.59
4.76	101.91
8.36	100.85
12.31	95.94
15.33	95.46
18.63	93.99
22.17	93.63
25.23	93.58
28.42	92.95
33.03	92.79
36.35	91.80
41.71	90.44
49.24	91.05



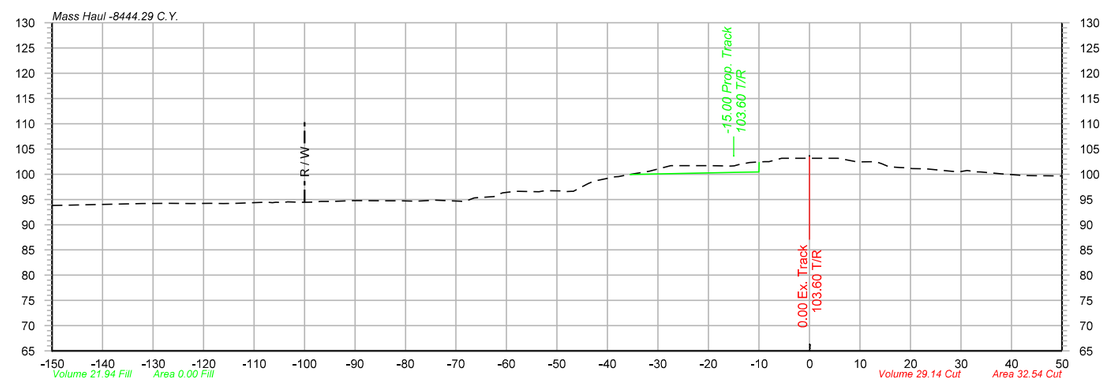
1558+00

-150.00	94.38
-146.93	94.33
-142.62	94.33
-139.04	94.31
-134.98	94.22
-131.47	94.29
-126.76	94.28
-123.18	94.26
-114.87	94.17
-109.45	94.35
-105.28	94.33
-98.03	94.35
-93.05	94.30
-88.15	94.22
-84.88	94.22
-80.97	94.51
-77.87	94.07
-71.75	93.75
-66.15	97.38
-61.93	99.26
-58.44	100.50
-55.04	101.58
-51.66	102.96
-47.48	104.52
-43.12	104.46
-39.14	105.44
-36.03	104.17
-32.44	102.32
-27.46	101.64
-24.43	101.65
-21.23	101.63
-16.86	101.50
-13.81	101.73
-8.53	102.24
-5.17	102.74
1.75	103.12
7.99	102.53
11.46	101.59
15.23	101.40
18.61	101.18
22.77	100.76
28.23	100.57
31.66	101.39
37.09	101.33
41.68	100.89
45.17	98.84
48.28	97.49



1556+61

-150.00	94.23
-143.97	94.35
-139.49	94.39
-134.83	94.35
-129.41	94.36
-122.76	94.44
-119.19	94.74
-114.23	95.14
-104.58	95.27
-100.75	95.31
-94.69	95.45
-90.96	95.54
-85.29	94.63
-81.06	94.25
-74.84	93.88
-69.04	93.67
-65.13	94.22
-60.44	94.47
-55.57	94.92
-52.05	94.77
-46.82	95.22
-42.97	95.10
-36.73	96.14
-33.47	96.09
-28.78	95.94
-25.46	95.62
-21.47	98.25
-18.45	100.07
-13.95	100.04
-10.62	100.26
-6.88	100.57
-2.37	100.53
1.34	100.50
6.00	100.69
9.31	99.04
12.73	94.66
18.33	92.82
21.46	92.29
25.35	92.36
29.15	91.37
32.51	91.01
36.89	90.42
42.32	90.31
46.75	90.53
50.00	90.93



1557+00

-150.00	93.80
-137.80	94.07
-133.90	94.16
-126.81	94.22
-122.37	94.19
-118.65	94.22
-113.47	94.23
-108.04	94.43
-104.13	94.42
-100.62	94.44
-96.80	94.60
-90.21	94.78
-83.82	94.74
-78.00	94.66
-74.08	94.84
-69.11	94.64
-62.49	95.55
-58.24	96.61
-53.57	96.54
-49.12	96.69
-43.87	98.10
-38.50	99.47
-32.07	100.52
-27.47	101.67
-19.60	101.68
-15.63	101.62
-11.86	102.33
-7.99	102.50
5.59	103.16
8.76	102.56
13.12	102.50
17.34	101.37
23.07	101.06
28.28	100.55
31.79	100.63
39.48	99.93
42.56	99.74
46.82	99.69
50.00	99.65

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

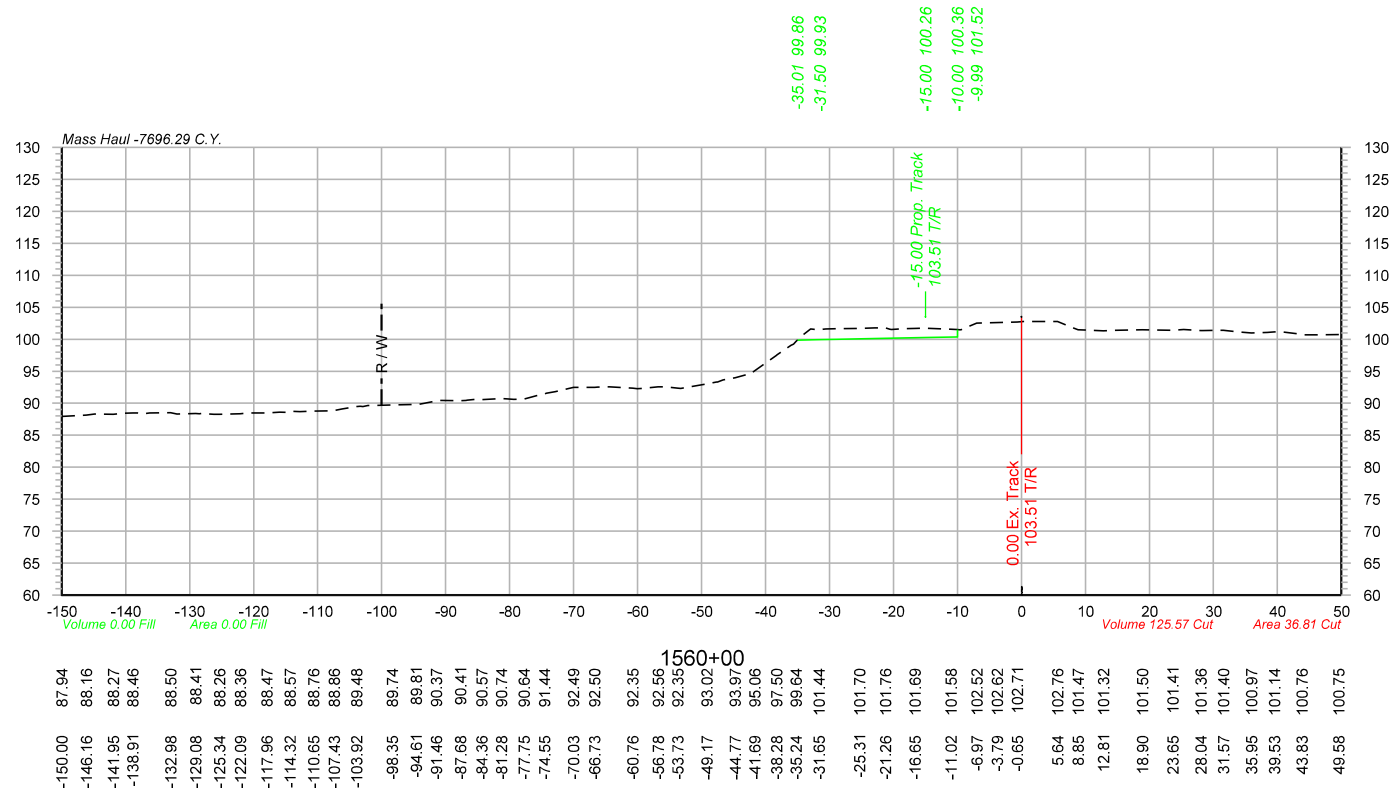
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 041 of 139

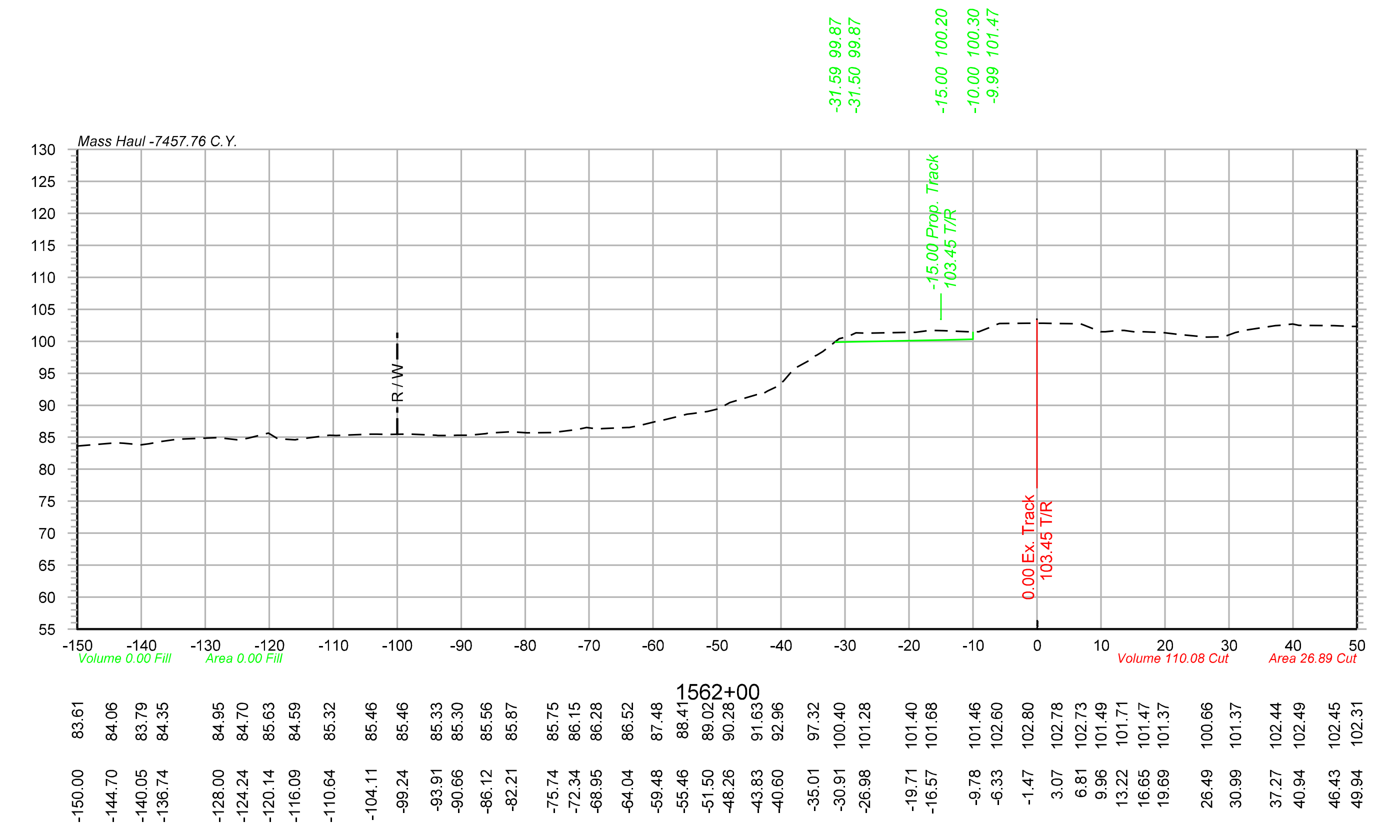
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

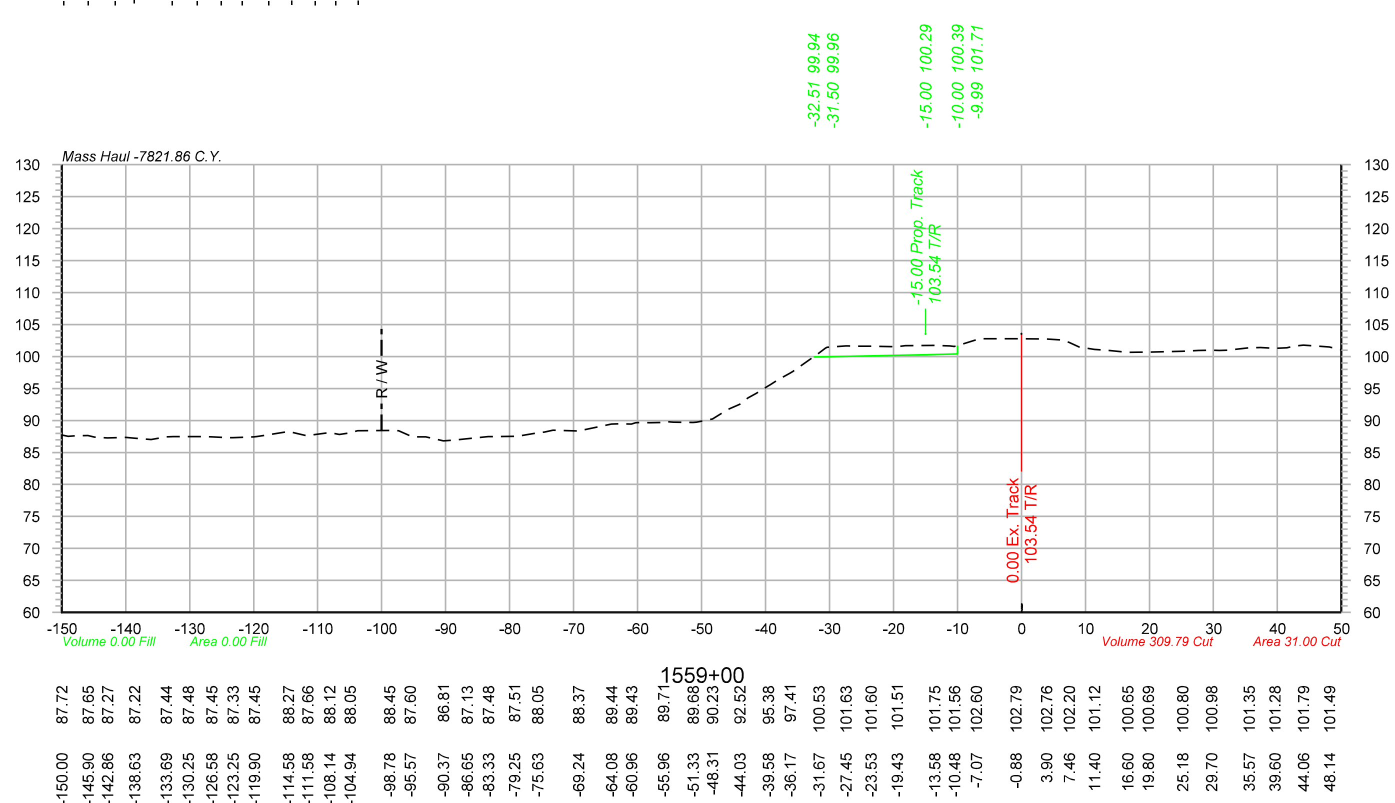
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

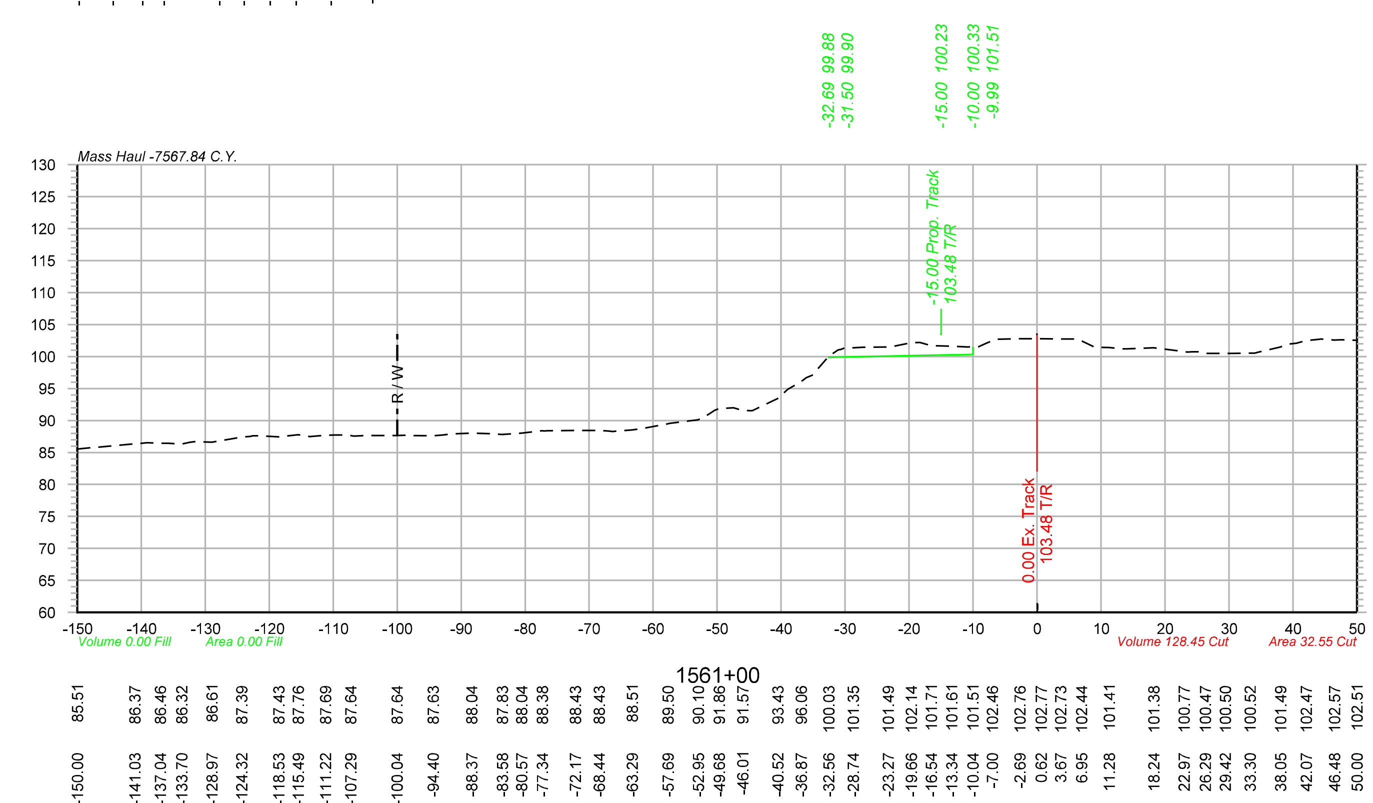
SHEET TITLE:
CROSS SECTIONS STA.1556+61 TO STA.1558+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55173\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200, Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

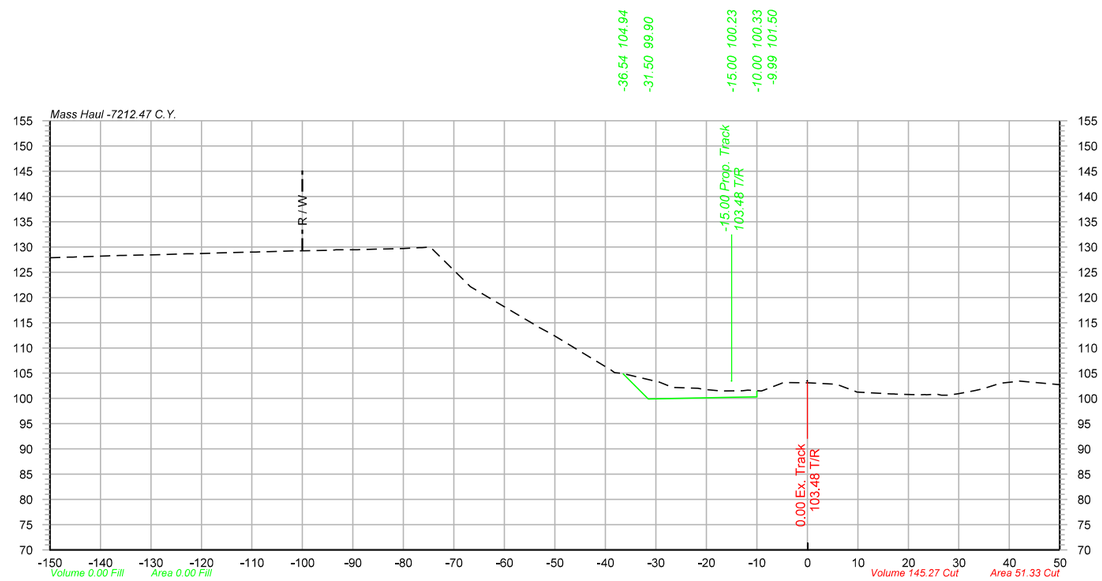
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 042 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

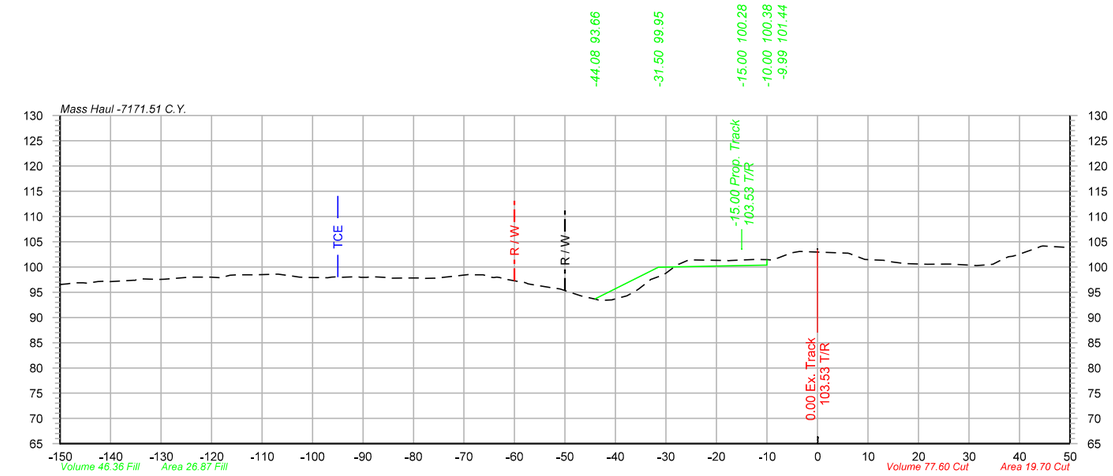
SHEET TITLE:
CROSS SECTIONS STA.1559+00 TO STA.1562+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



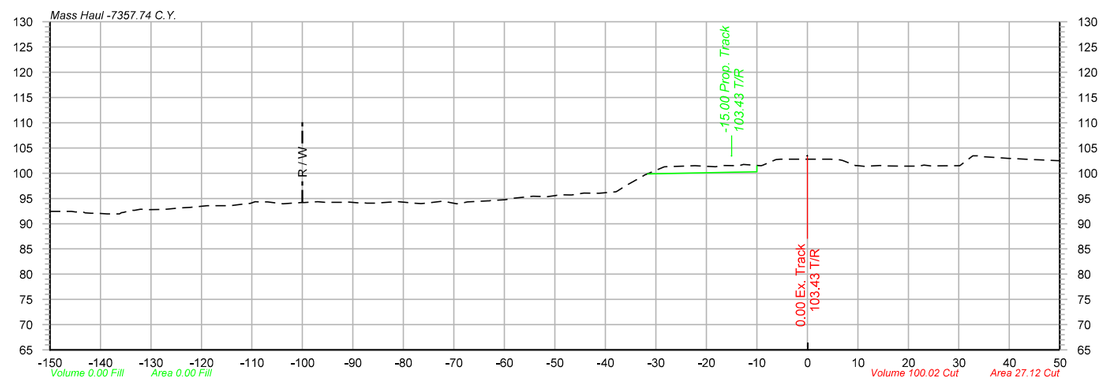
1564+00

-150.00	127.85
-146.36	127.98
-143.23	128.08
-138.36	128.26
-131.88	128.40
-127.64	128.50
-122.93	128.63
-117.35	128.78
-113.99	128.87
-110.13	128.97
-106.63	129.08
-101.42	129.22
-95.27	129.30
-92.06	129.43
-88.27	129.49
-83.04	129.62
-79.92	129.71
-76.85	129.84
-68.05	123.44
-56.33	115.98
-50.54	112.68
-39.65	106.11
-29.30	103.23
-24.38	102.11
-20.65	101.80
-17.03	101.47
-13.60	101.53
-10.03	101.50
-5.02	103.04
-0.58	103.10
5.72	102.81
9.62	101.33
16.62	100.90
22.25	100.73
25.66	100.84
29.89	100.94
33.20	101.58
38.23	103.02
41.84	103.43
50.00	102.75



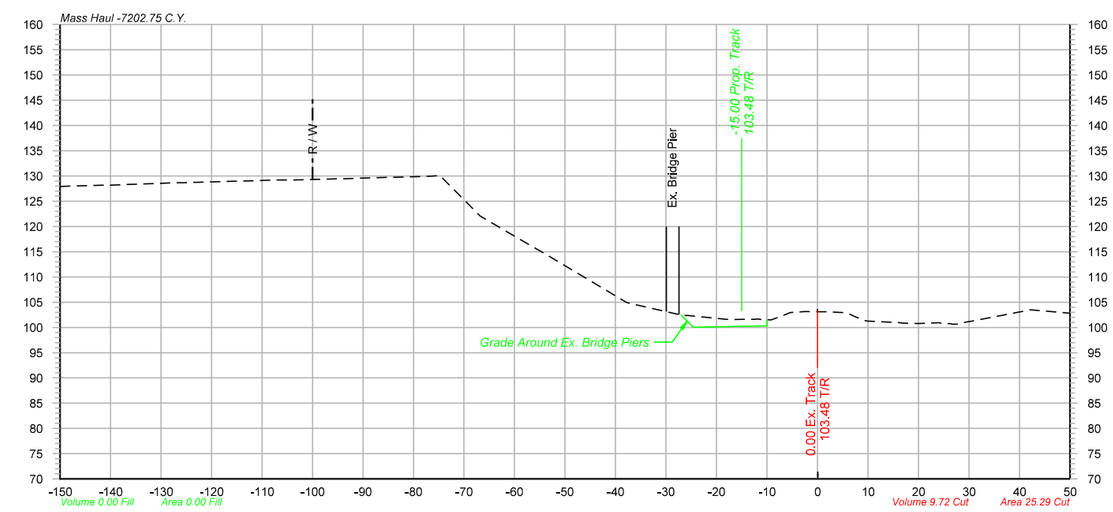
1565+00

-150.00	96.51
-146.27	96.87
-142.50	97.10
-135.49	97.35
-130.58	97.51
-125.76	97.85
-122.59	97.97
-118.21	97.85
-114.92	98.43
-111.63	98.44
-107.12	98.57
-103.72	98.14
-100.03	97.89
-96.97	97.86
-91.12	98.09
-85.84	97.93
-81.27	97.83
-77.71	97.73
-71.73	98.20
-68.66	98.46
-64.47	97.93
-59.45	97.14
-52.53	95.86
-46.86	94.29
-43.09	93.37
-37.75	94.26
-33.55	97.08
-30.26	98.54
-25.46	101.40
-18.40	101.27
-12.33	101.50
-9.04	101.36
-5.88	102.49
5.78	102.73
9.37	101.48
13.07	101.33
17.14	100.70
21.77	100.51
25.42	100.59
31.53	100.26
34.71	100.51
37.86	102.05
43.62	103.82
47.42	103.97



1563+00

-150.00	92.44
-145.72	92.42
-141.79	92.08
-138.66	91.95
-135.43	92.22
-132.12	92.85
-128.29	92.79
-124.43	93.12
-119.26	93.51
-114.24	93.57
-110.32	94.04
-106.90	94.30
-103.84	93.92
-100.73	94.13
-96.98	94.35
-92.33	94.25
-88.73	94.09
-85.71	94.08
-82.63	94.26
-79.17	94.17
-75.51	94.08
-72.33	94.44
-67.87	94.20
-63.23	94.52
-60.15	94.74
-55.94	95.26
-51.47	95.35
-47.07	95.69
-41.31	96.03
-37.92	96.32
-32.74	99.31
-28.42	101.24
-24.54	101.42
-18.18	101.28
-13.58	101.48
-9.81	101.52
-6.63	102.54
-0.10	102.79
4.60	102.78
8.97	101.72
14.41	101.54
18.72	101.42
22.05	101.41
29.27	101.47
32.76	103.42
37.32	103.10
40.77	102.89
44.70	102.68
49.60	102.47



1564+07

-150.00	127.91
-146.93	128.02
-143.38	128.13
-139.25	128.20
-134.73	128.37
-131.35	128.50
-128.05	128.60
-124.42	128.70
-120.87	128.81
-117.51	128.90
-113.88	129.00
-109.66	129.10
-105.12	129.18
-100.75	129.27
-97.49	129.36
-93.33	129.46
-90.17	129.56
-85.91	129.69
-82.00	129.79
-78.03	129.91
-74.79	130.09
-66.80	122.09
-59.55	117.84
-53.32	114.21
-41.77	107.31
-37.80	104.93
-26.77	102.42
-17.16	101.52
-12.42	101.59
-9.20	101.49
-5.66	102.83
-2.42	103.14
1.71	103.11
5.15	102.93
9.23	101.45
13.85	101.06
16.93	100.85
24.10	100.92
27.63	100.65
41.98	103.44
47.66	103.02

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 043 of 139

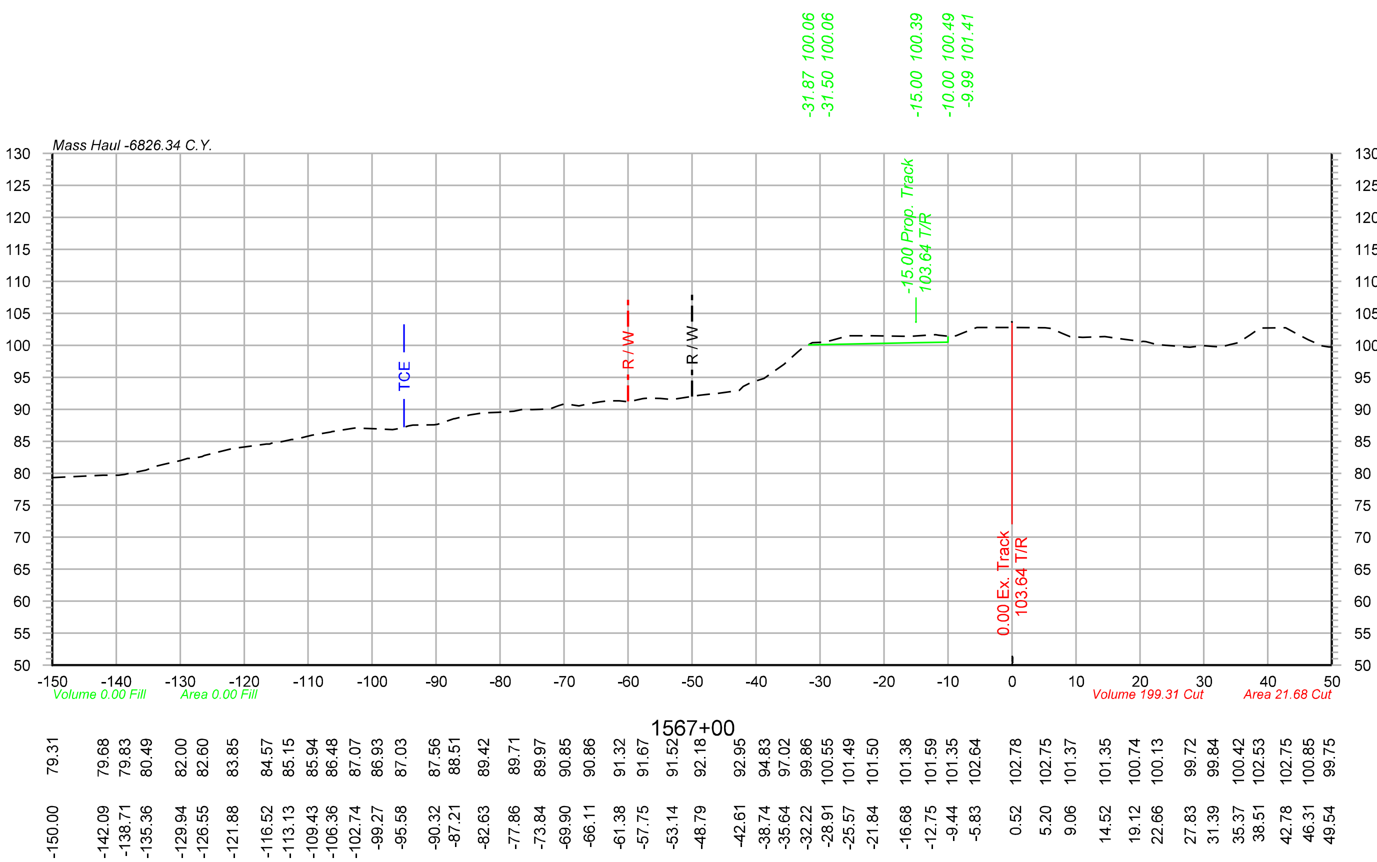
UNION PACIFIC RAILROAD

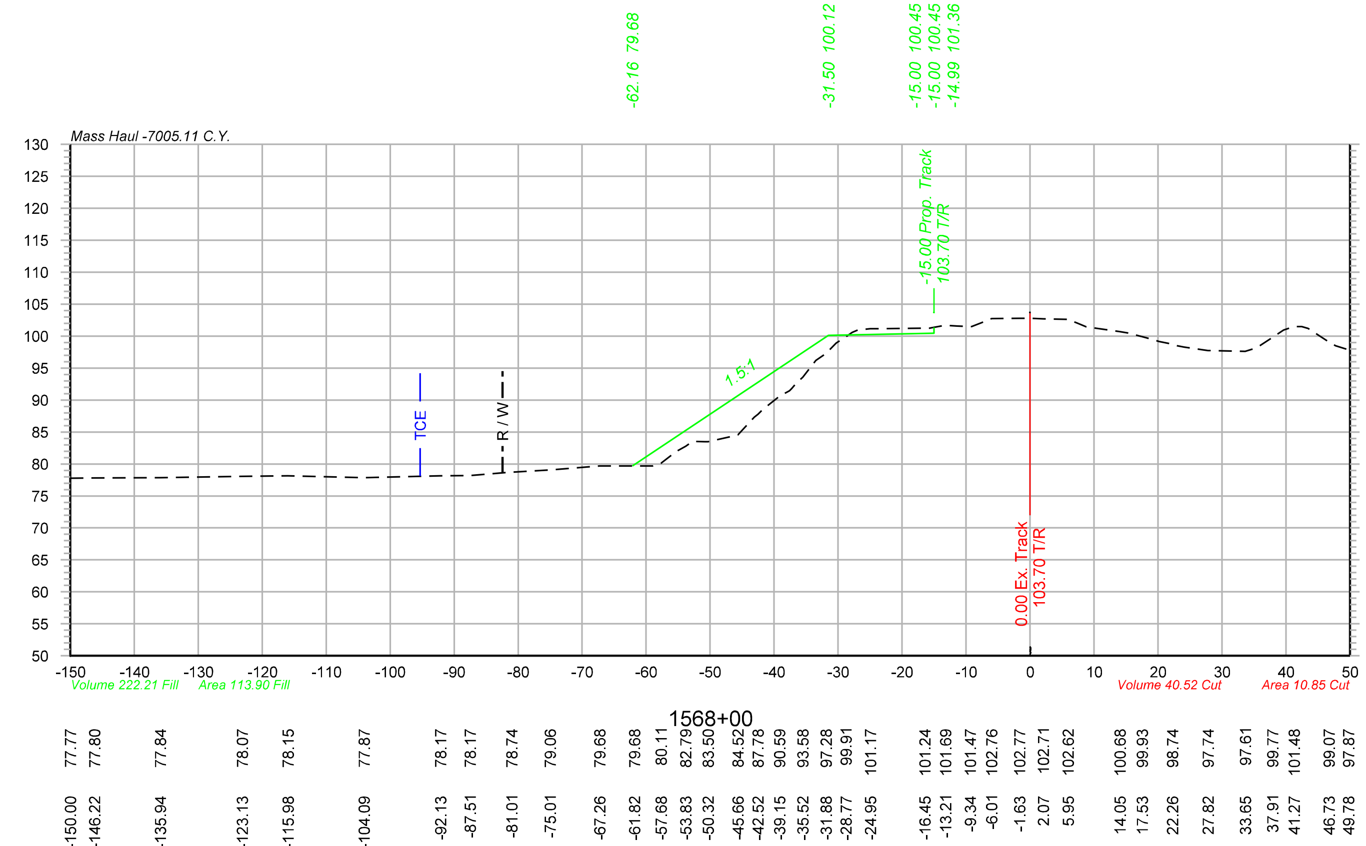
Office of Assistant Vice President
Engineering Design/Construction

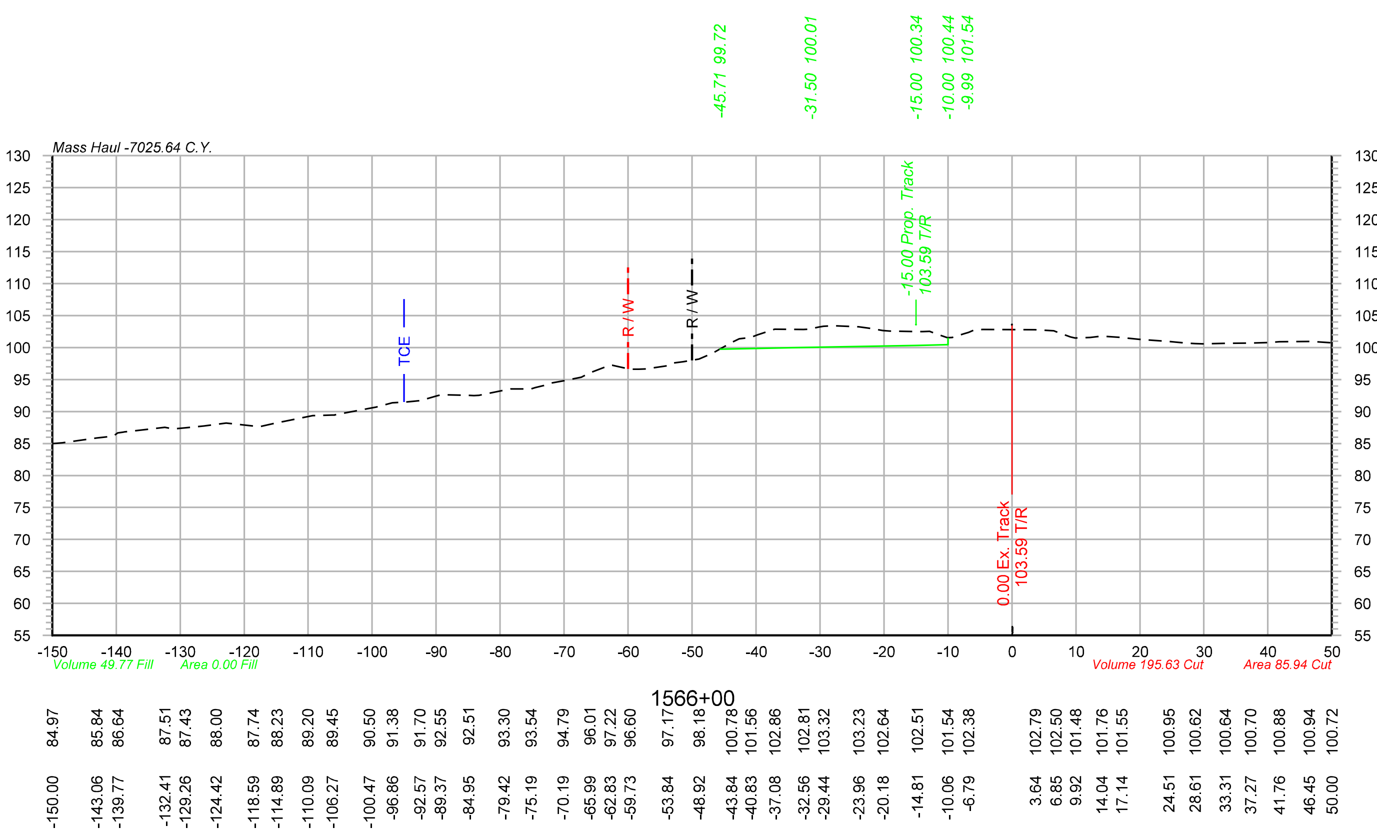
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

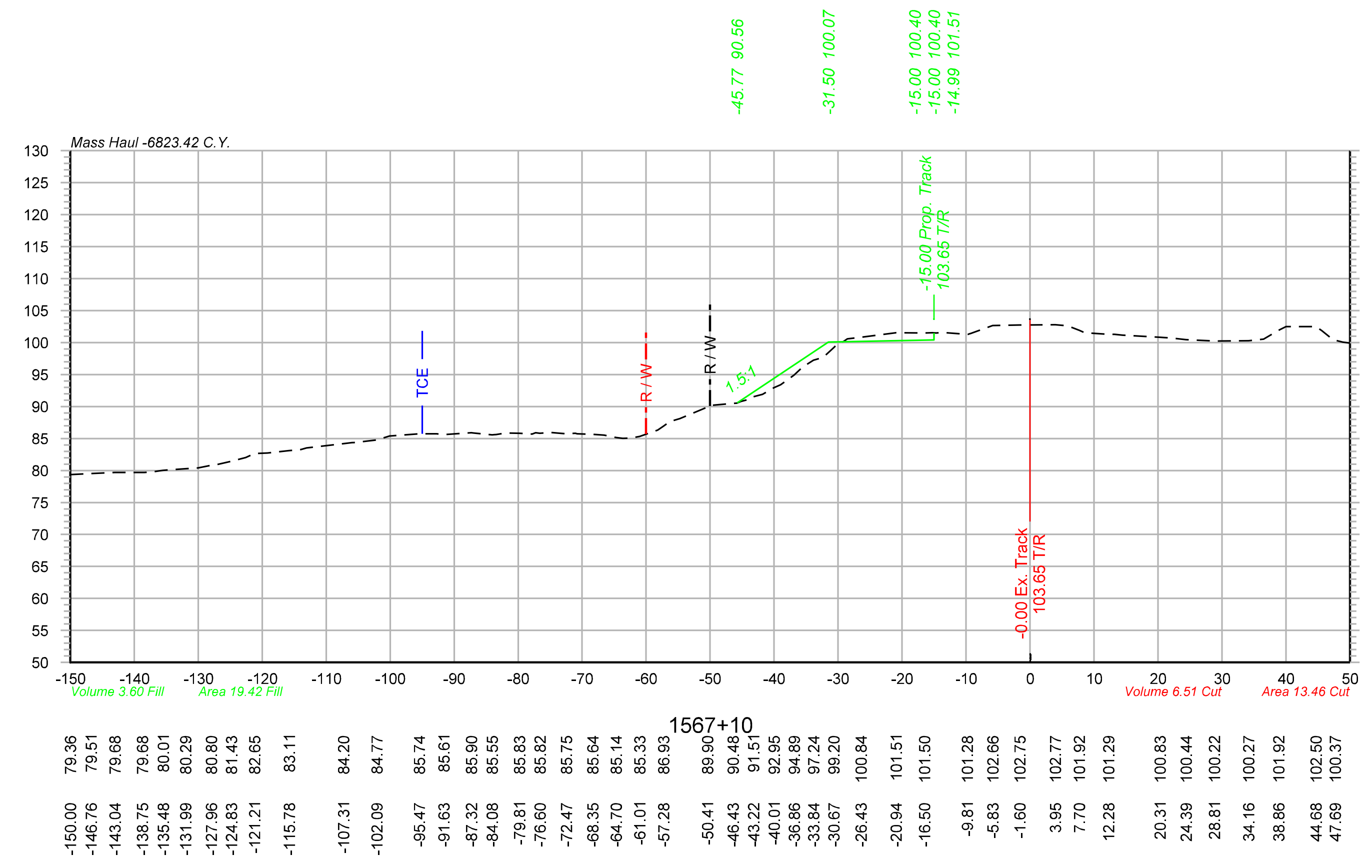
SHEET TITLE:
CROSS SECTIONS STA.1563+00 TO STA.1565+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55773\ipsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-X5.dgn
Default
10/20/2014





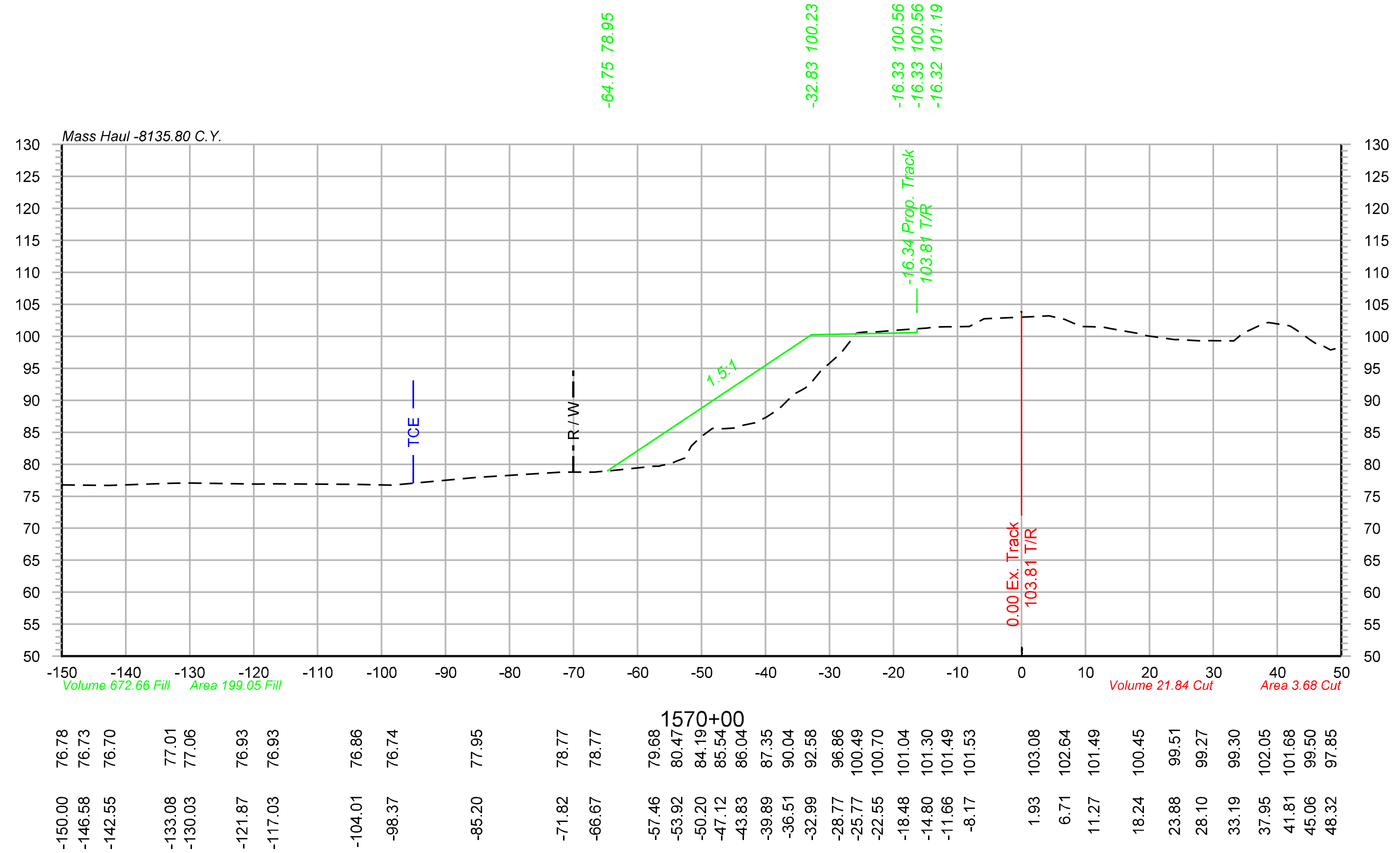


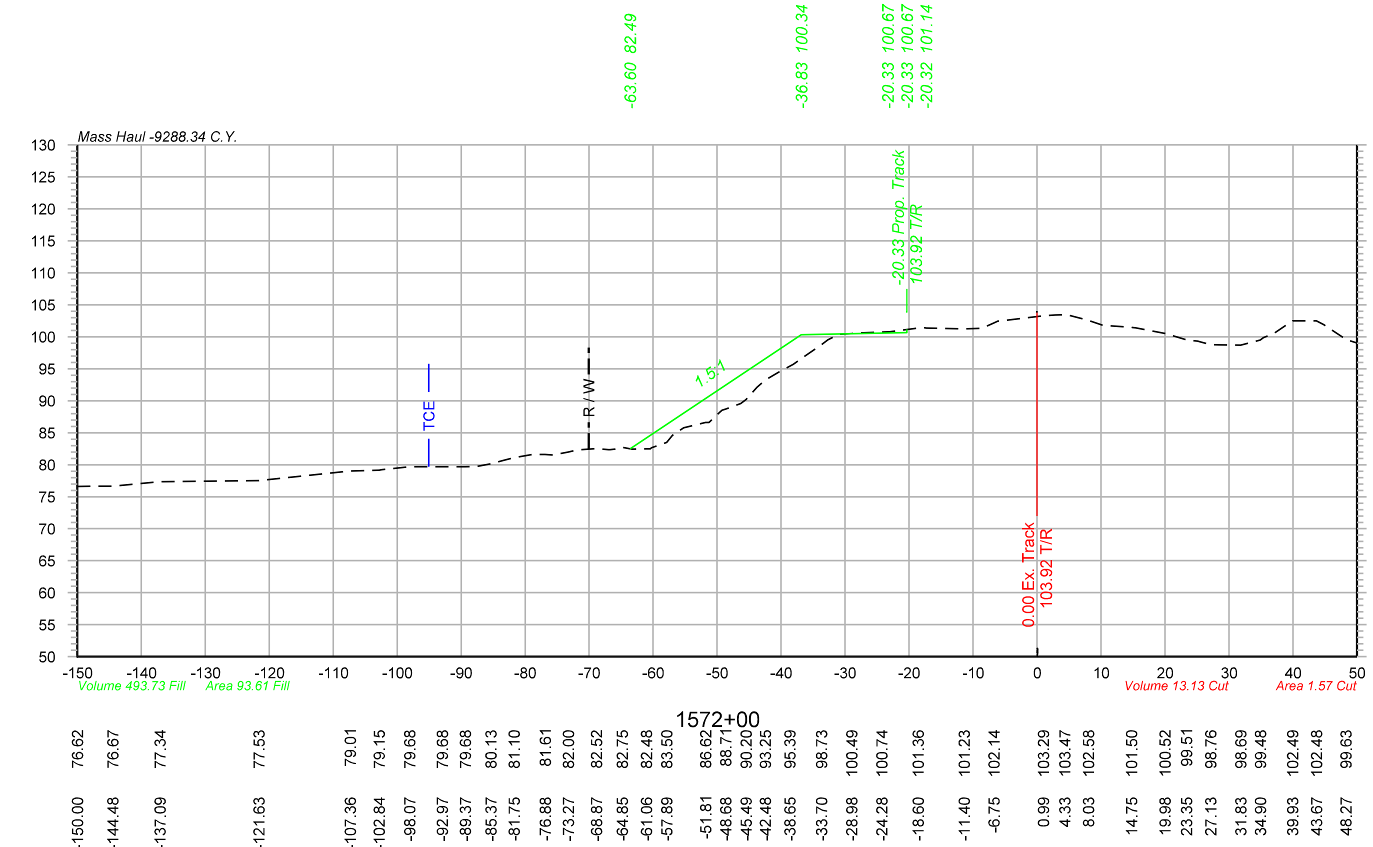


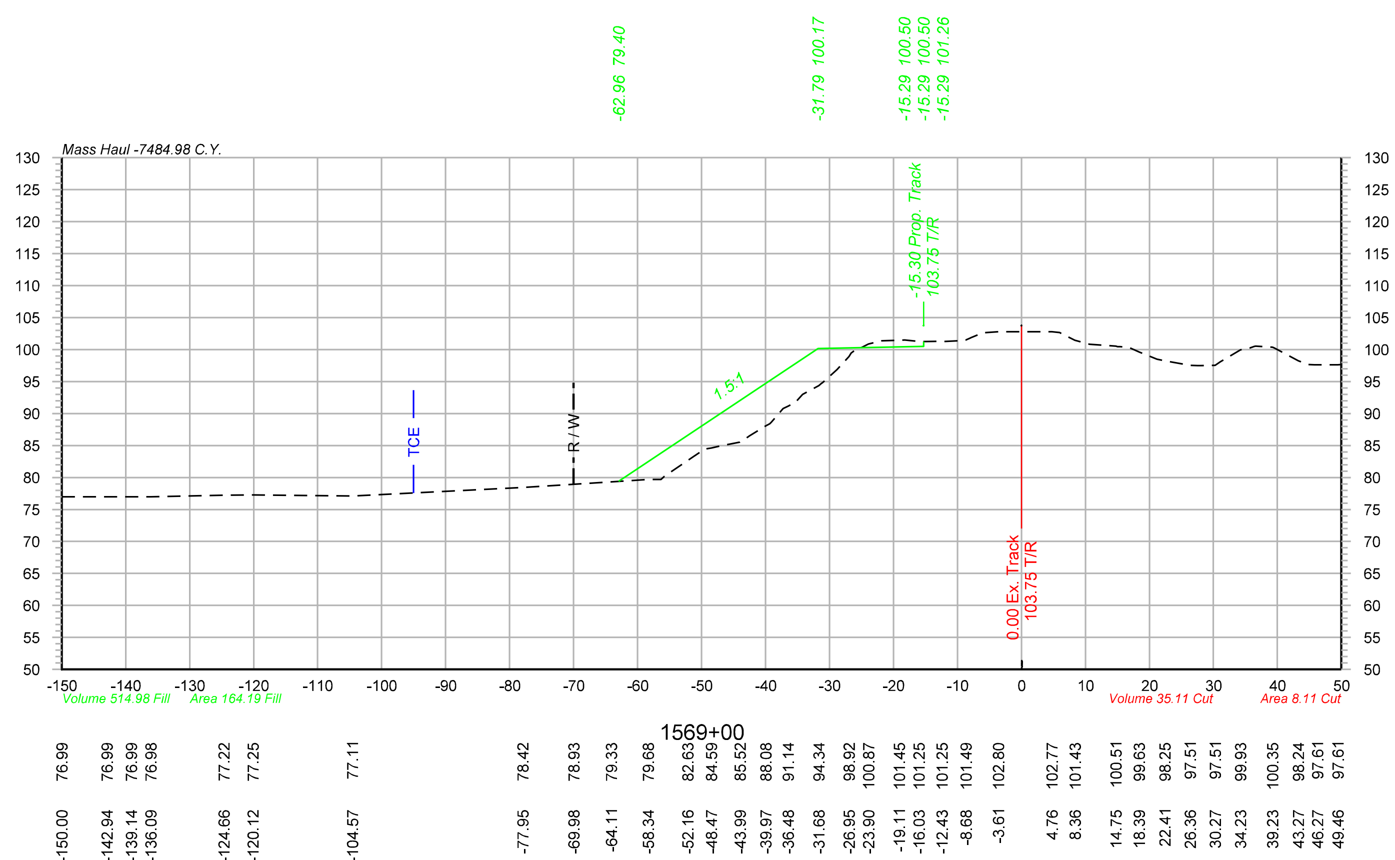
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

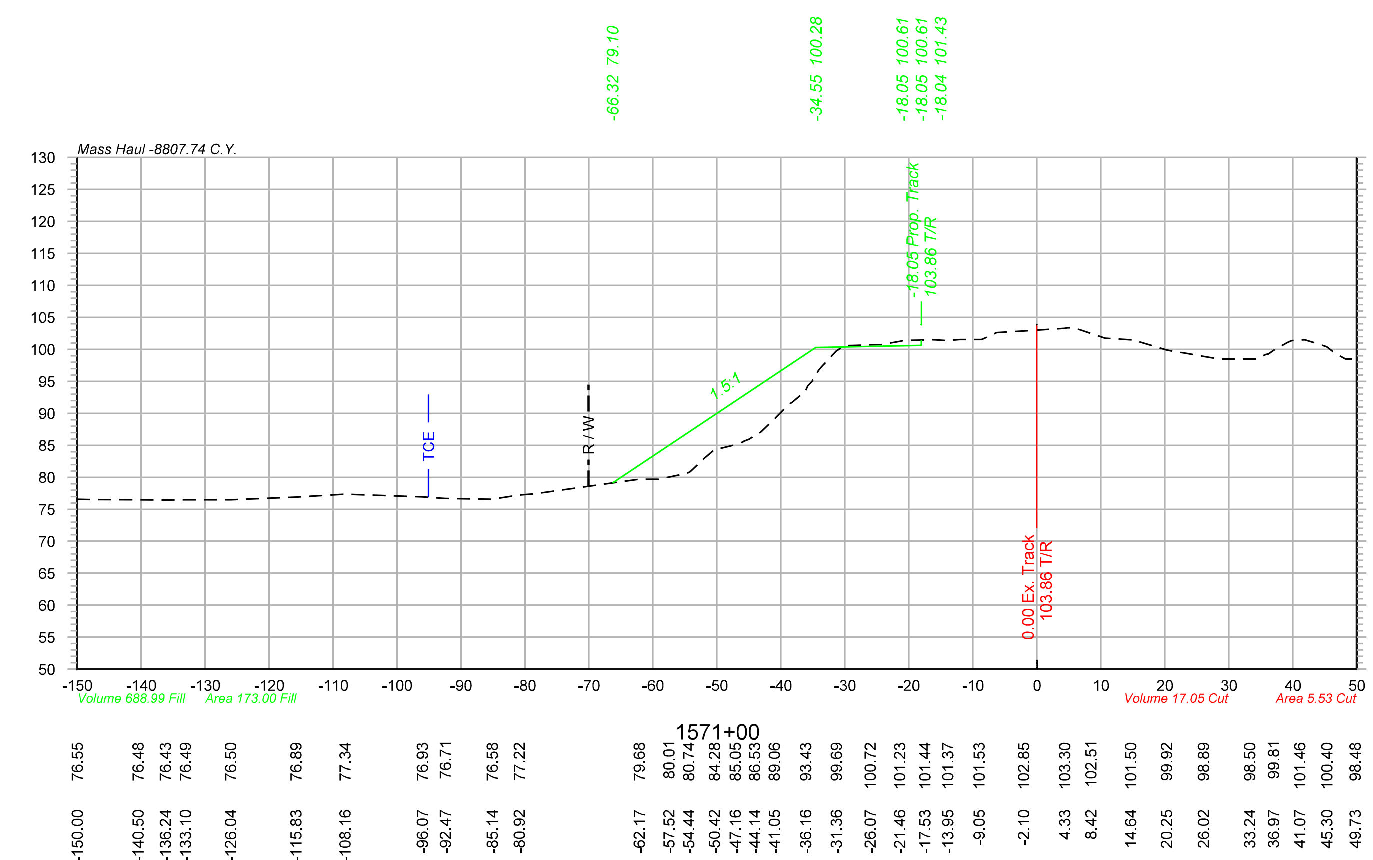
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 044 of 139	SHEET TITLE: CROSS SECTIONS STA.1566+00 TO STA.1568+00









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

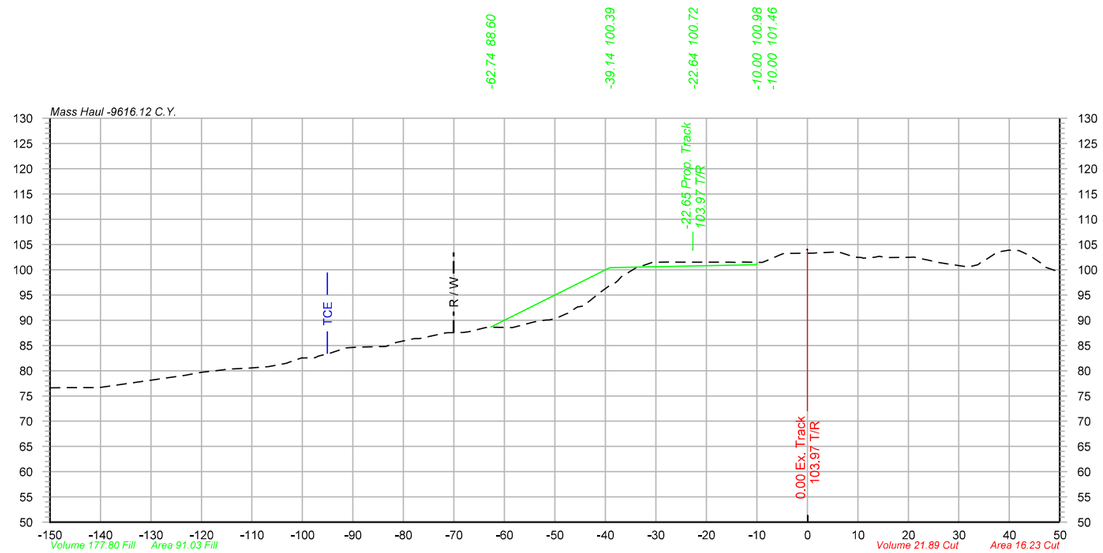
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 045 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design/Construction

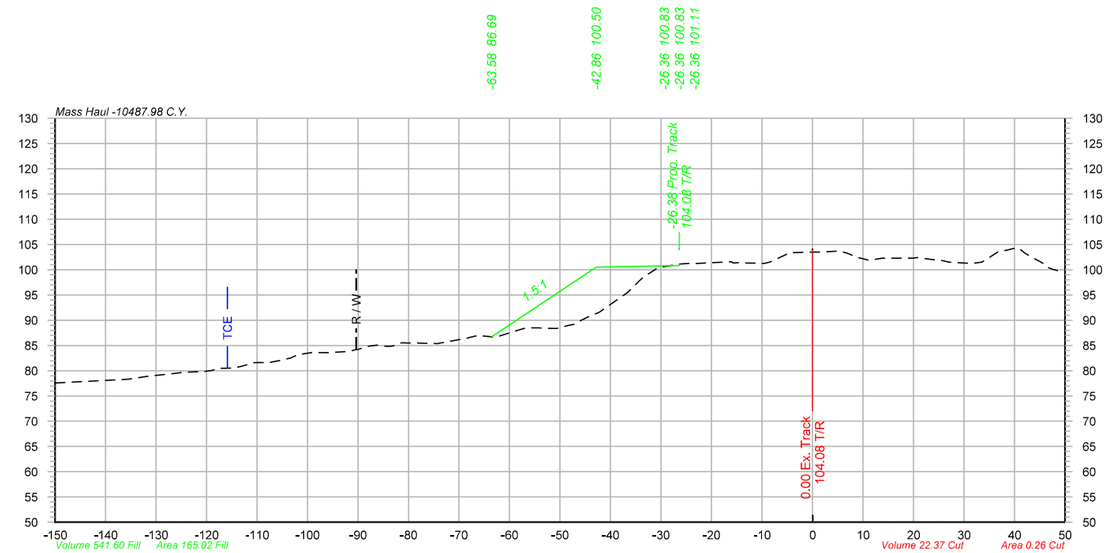
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1569+00 TO STA.1572+00



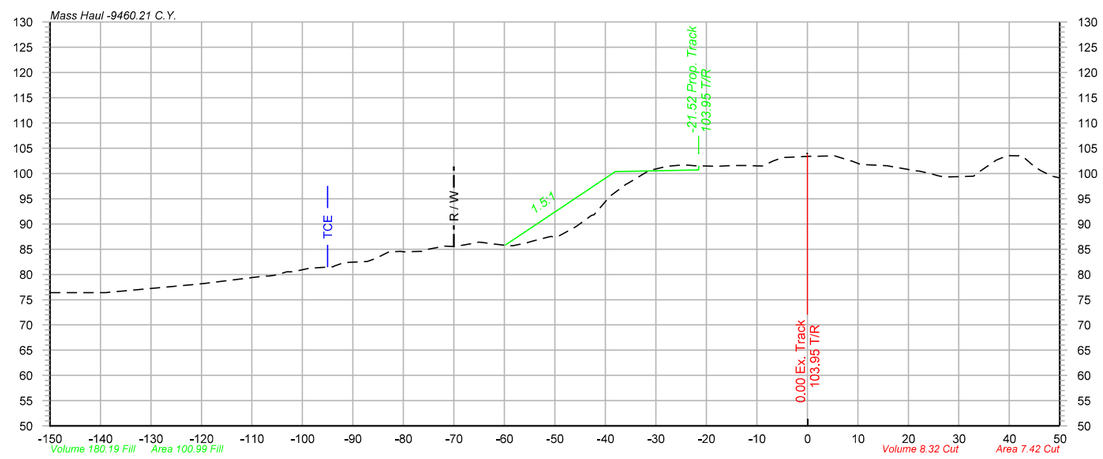
1573+00

-150.00	76.62
-146.16	76.64
-140.32	76.64
-123.10	79.13
-119.96	79.68
-115.84	80.17
-111.09	80.50
-107.75	80.73
-103.11	81.50
-100.01	82.56
-96.79	82.90
-91.49	84.50
-84.65	84.79
-81.36	85.62
-77.81	86.36
-71.83	87.44
-68.11	87.57
-63.78	88.51
-59.34	88.56
-56.22	89.11
-51.92	90.03
-47.84	91.25
-44.10	92.87
-41.02	95.52
-37.91	97.47
-33.74	100.50
-30.70	101.45
-27.04	101.55
-22.28	101.49
-18.09	101.47
-14.22	101.45
-9.52	101.45
-5.27	102.98
1.23	103.29
6.14	103.53
9.26	102.50
13.22	102.46
20.11	102.43
24.29	101.80
31.06	100.64
34.28	101.37
37.66	103.51
41.95	103.77
46.73	101.00
49.88	99.51



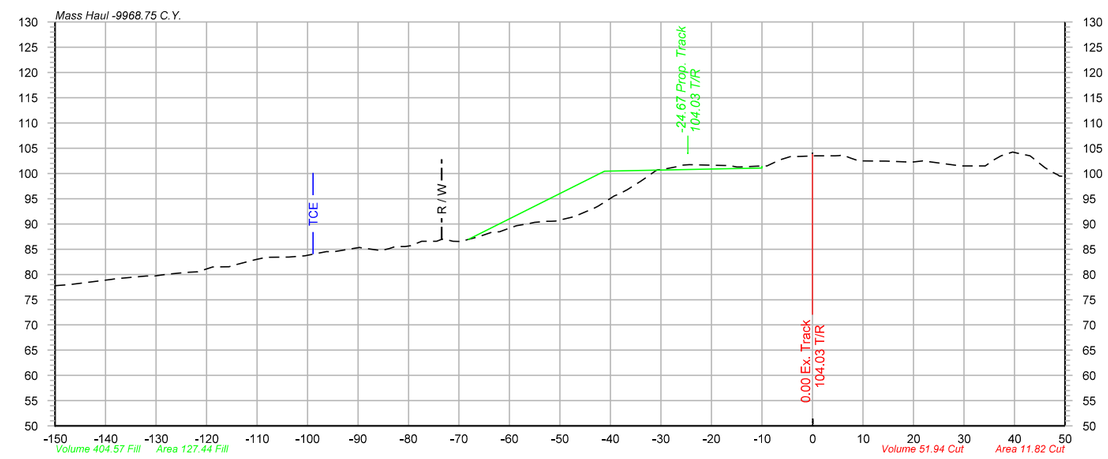
1575+00

-150.00	77.55
-135.45	78.33
-132.22	78.81
-126.49	79.46
-122.40	79.77
-118.88	80.08
-114.71	80.53
-110.46	81.59
-105.23	82.08
-101.84	83.23
-95.87	83.58
-91.91	83.82
-88.06	84.82
-84.28	84.81
-80.10	85.50
-75.15	85.40
-68.20	86.50
-63.03	86.64
-58.04	88.09
-54.31	88.47
-50.69	88.37
-47.08	89.18
-43.63	91.02
-39.83	93.24
-36.72	95.41
-33.33	98.65
-30.02	100.49
-26.38	101.11
-22.78	101.24
-18.80	101.45
-15.57	101.32
-10.16	101.26
-4.62	103.30
-0.83	103.49
5.44	103.70
8.73	102.48
11.80	101.96
15.45	102.27
19.83	102.26
24.89	101.87
31.48	101.24
36.70	103.50
40.35	104.34
43.54	102.42
47.59	100.08



1572+50

-150.00	76.39
-139.04	76.40
-120.80	78.05
-117.27	78.47
-107.46	79.68
-103.11	80.52
-98.62	81.23
-93.90	81.53
-88.15	82.54
-83.09	84.38
-76.35	84.57
-71.84	85.59
-66.93	86.02
-62.76	86.13
-59.16	85.70
-55.50	86.27
-51.17	87.43
-45.77	89.49
-42.75	91.67
-39.55	94.93
-36.28	97.58
-31.51	100.49
-27.82	101.39
-23.89	101.65
-20.49	101.50
-15.67	101.52
-11.76	101.57
-6.72	102.48
-2.66	103.26
0.51	103.39
5.38	103.50
8.63	102.51
15.78	101.52
21.69	100.48
24.81	99.85
28.05	99.34
32.88	99.47
37.29	102.53
41.55	103.49
44.78	101.50
47.98	99.71



1574+00

-150.00	77.77
-138.80	79.02
-131.91	79.68
-128.25	79.97
-124.49	80.36
-118.93	81.45
-115.54	81.53
-110.44	82.91
-103.72	83.45
-100.53	83.69
-96.24	84.51
-90.40	85.23
-85.47	84.72
-80.71	85.53
-77.68	86.44
-74.42	86.58
-71.19	86.55
-66.21	87.45
-61.96	88.45
-58.58	89.63
-55.02	90.30
-51.82	90.51
-47.73	91.34
-43.16	93.15
-40.06	95.01
-36.67	96.79
-32.51	99.51
-28.88	100.97
-25.60	101.66
-19.23	101.60
-14.97	101.28
-9.91	101.49
-6.29	102.73
0.63	103.50
4.49	103.50
7.59	103.05
13.85	102.46
19.59	102.25
25.02	102.07
29.32	101.50
34.24	101.51
37.34	103.48
40.53	104.02
45.97	101.22
50.00	99.40

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhe5573\jparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

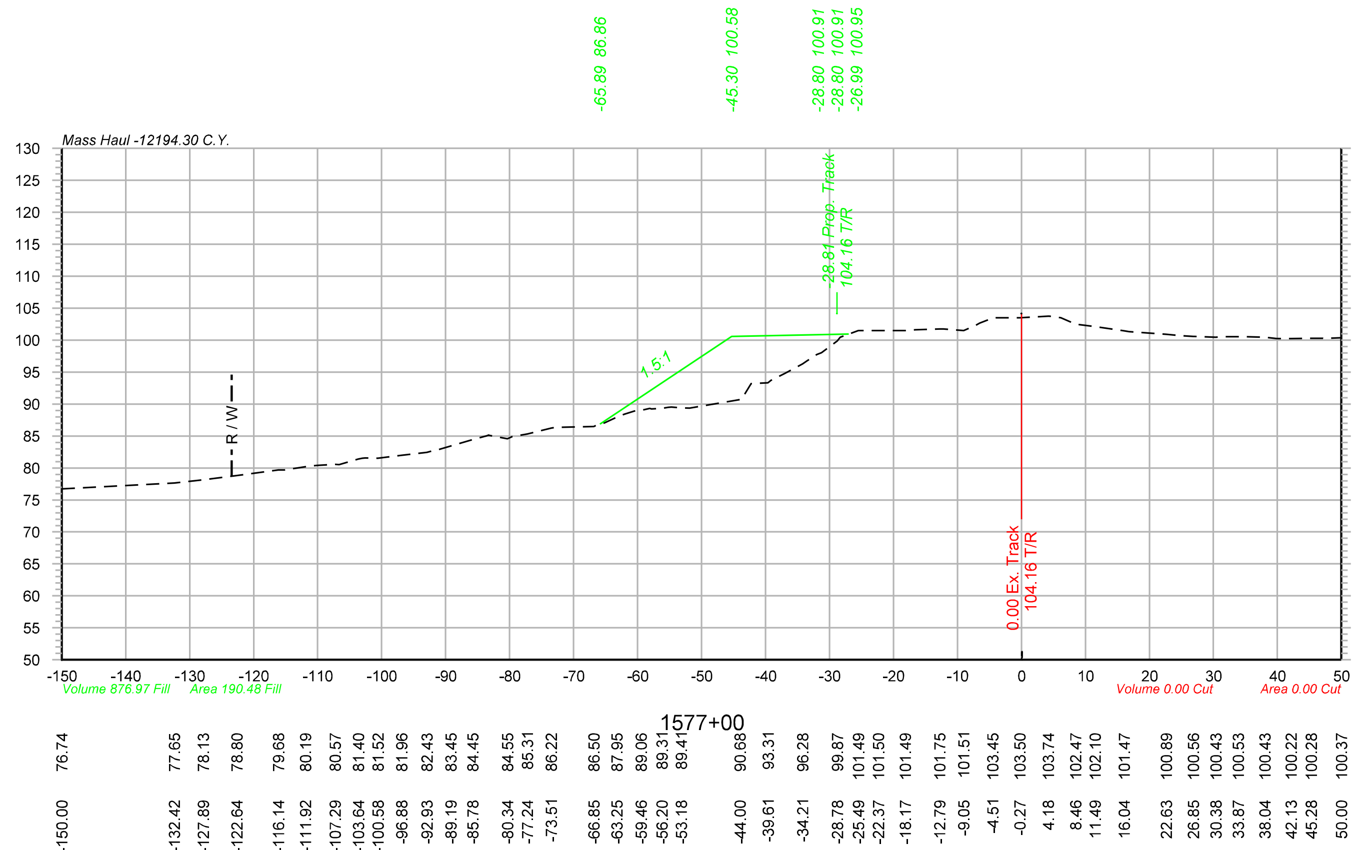
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 046 of 139

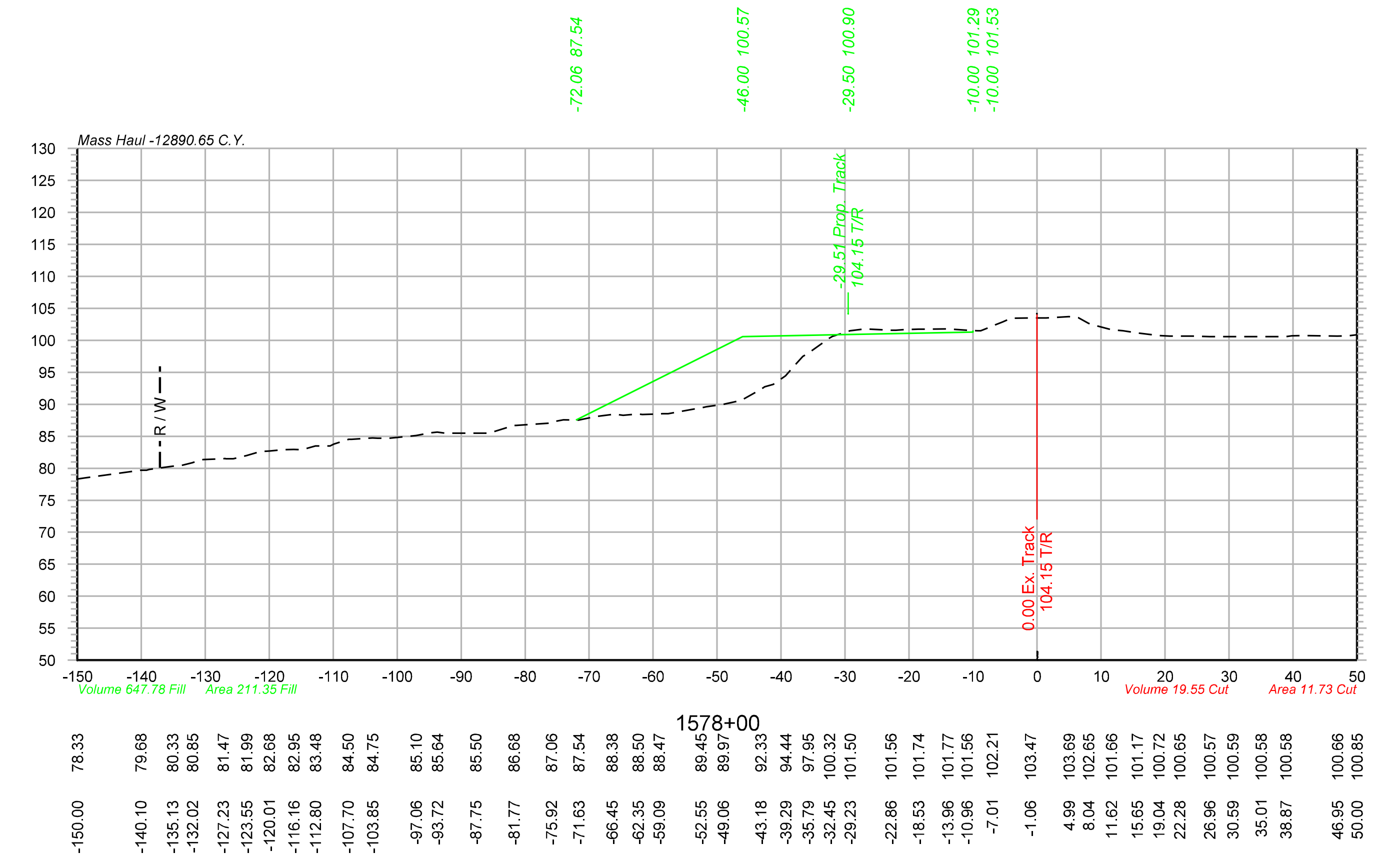
UNION PACIFIC RAILROAD

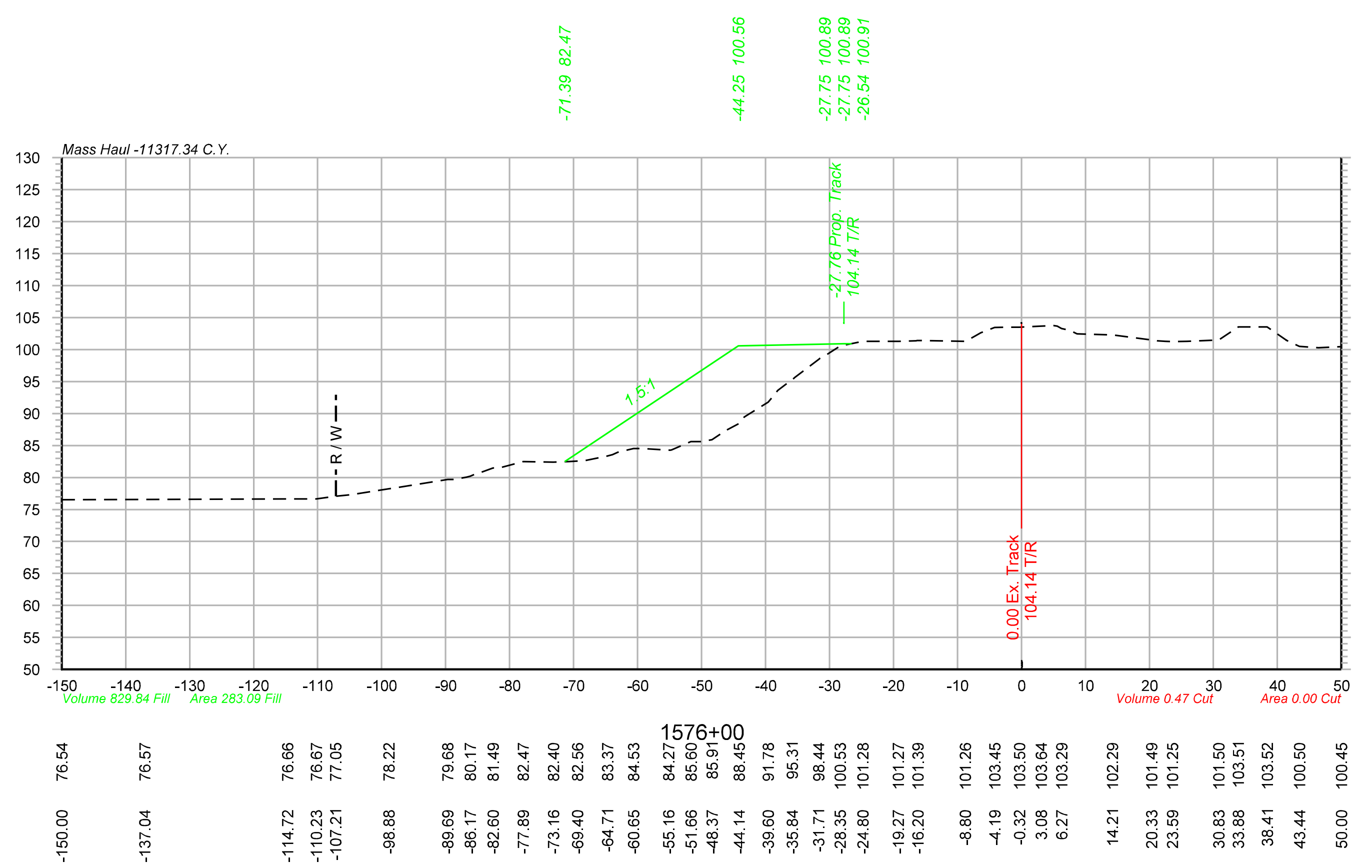
Office of Assistant Vice President
Engineering Design/Construction

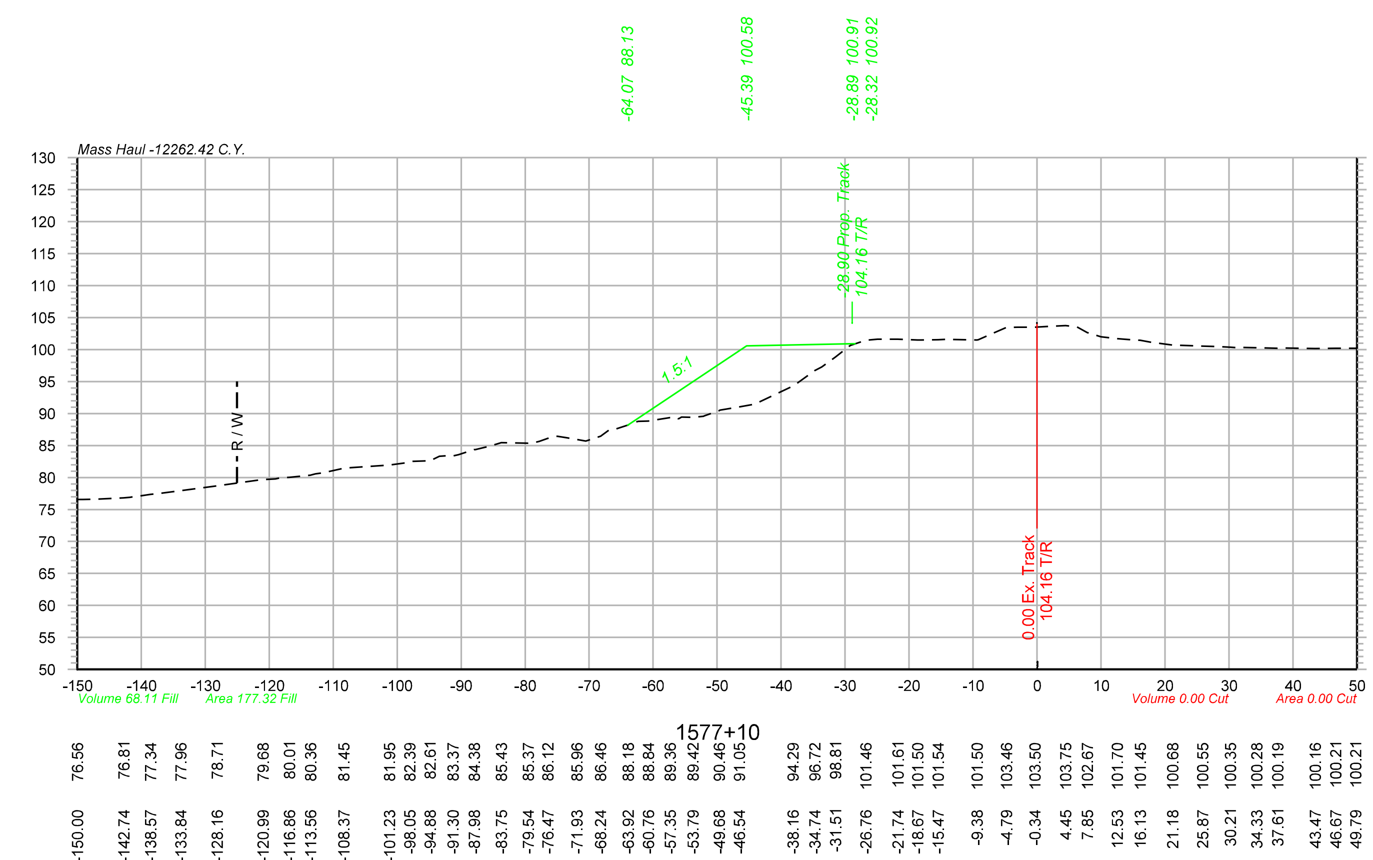
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1572+50 TO STA.1575+00







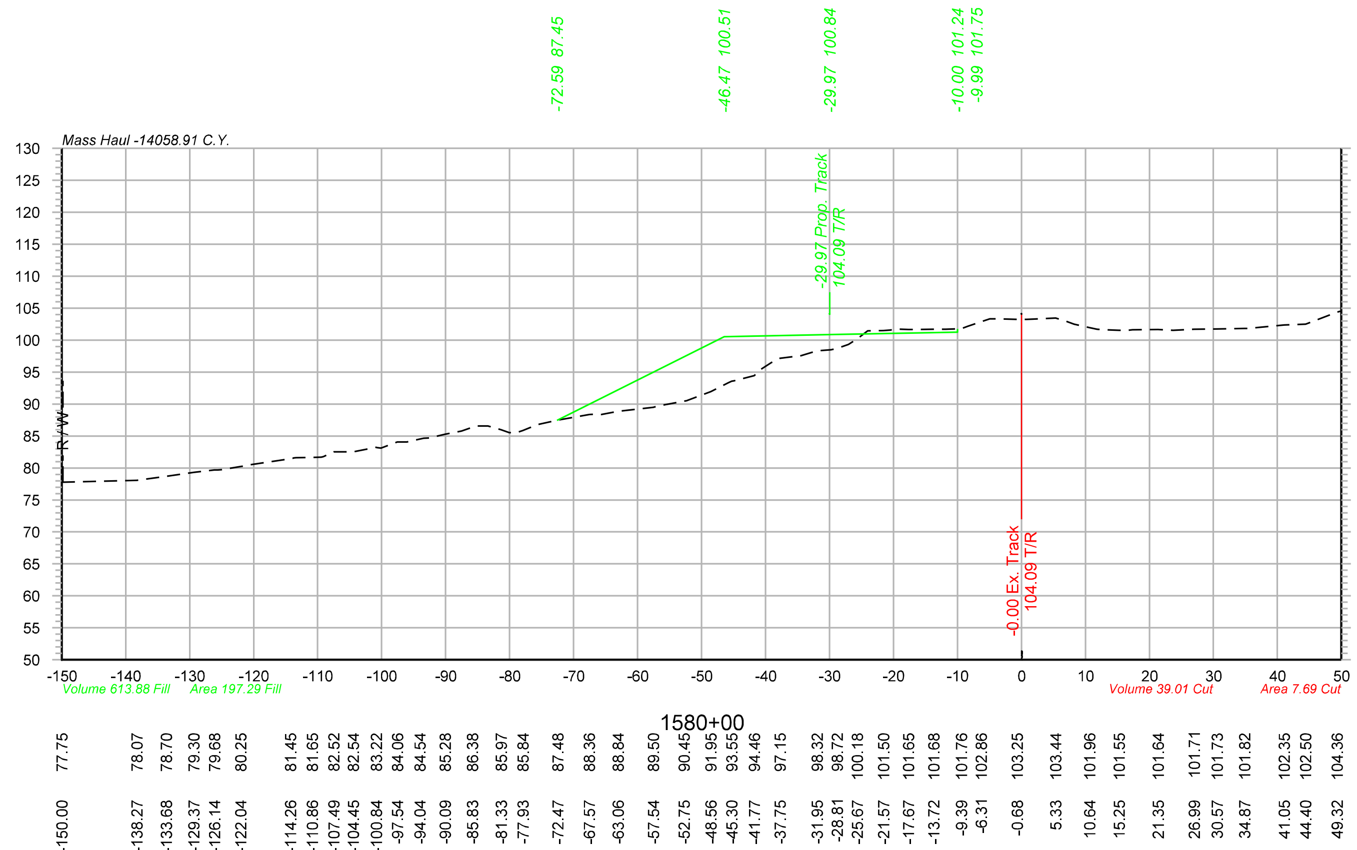


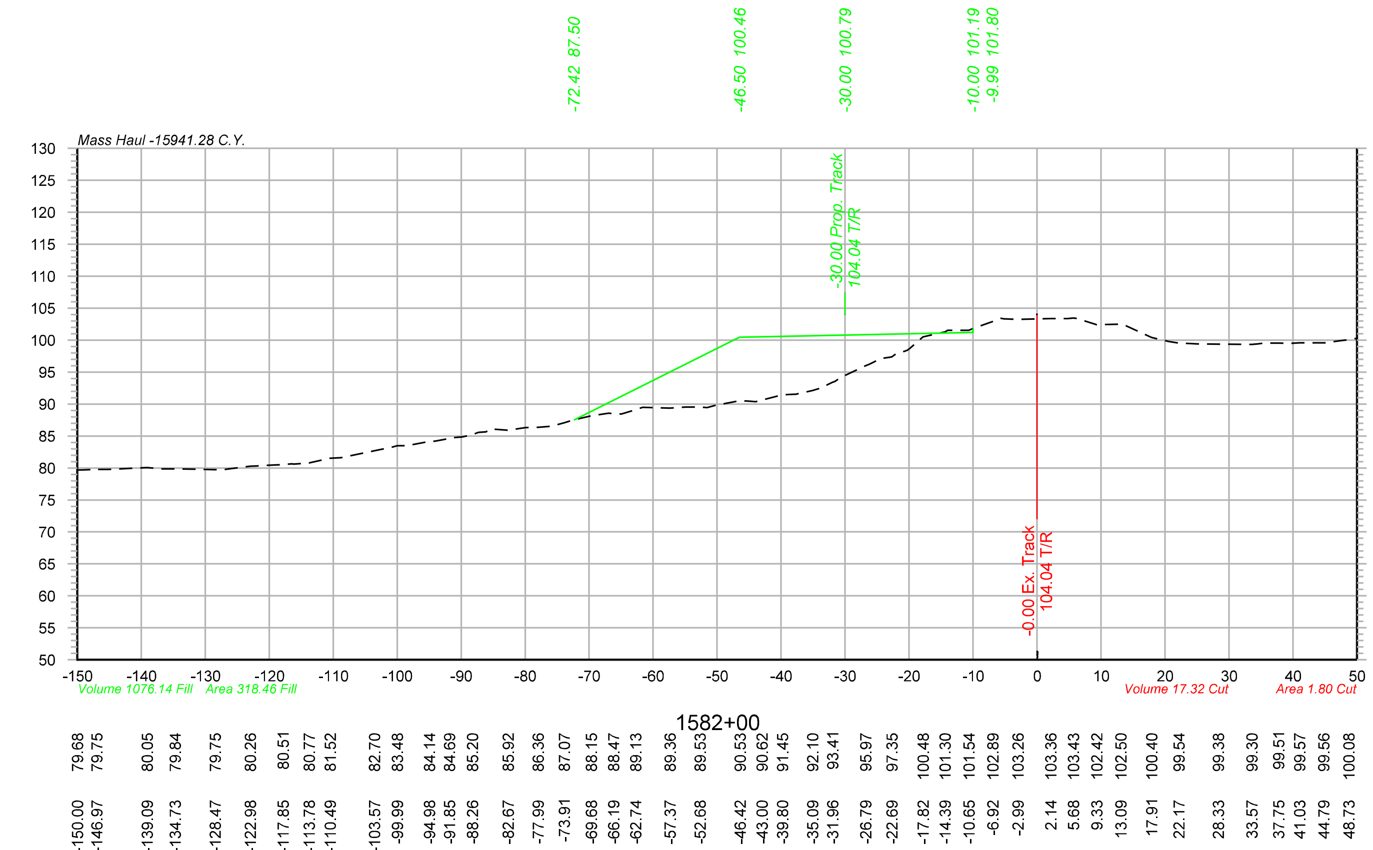
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

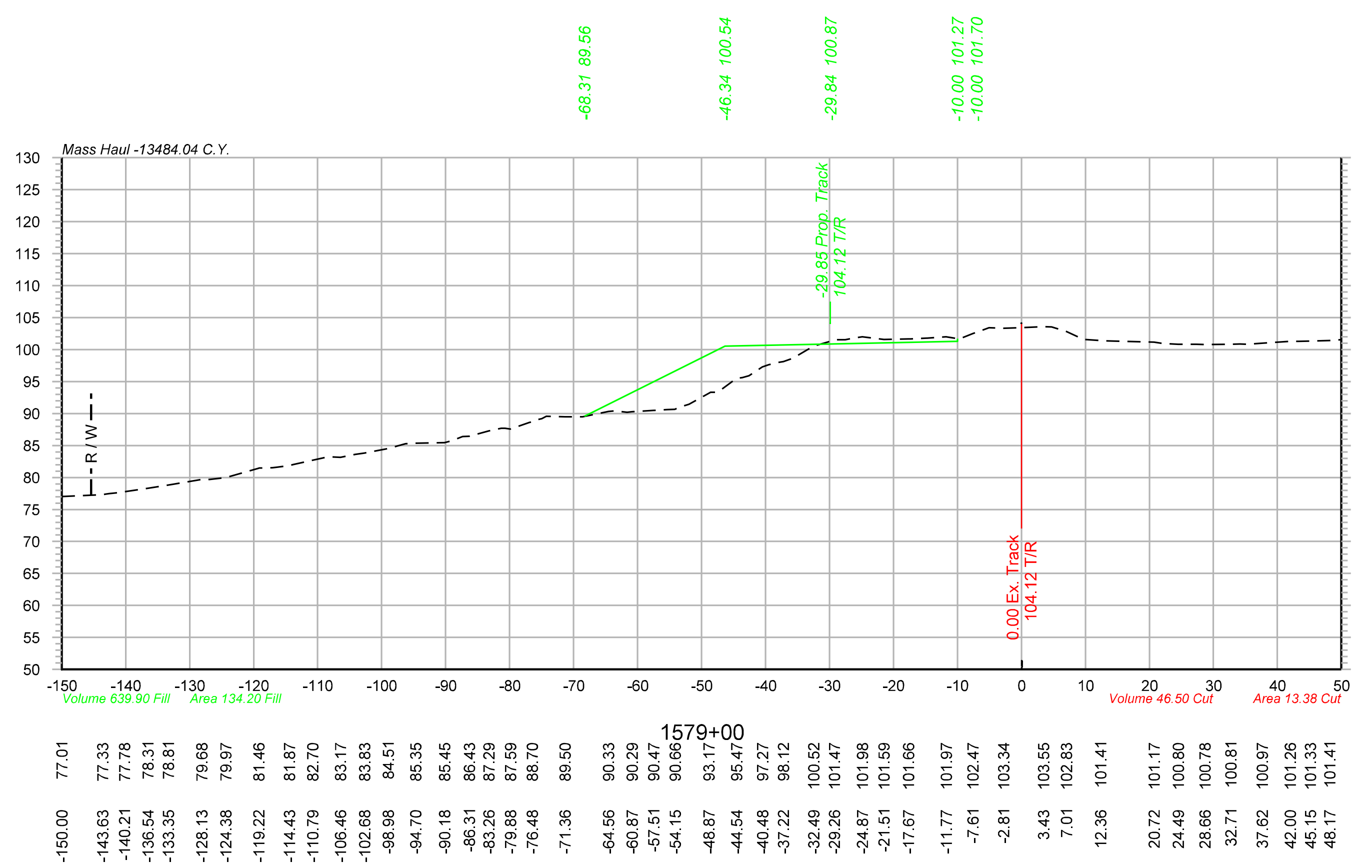
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

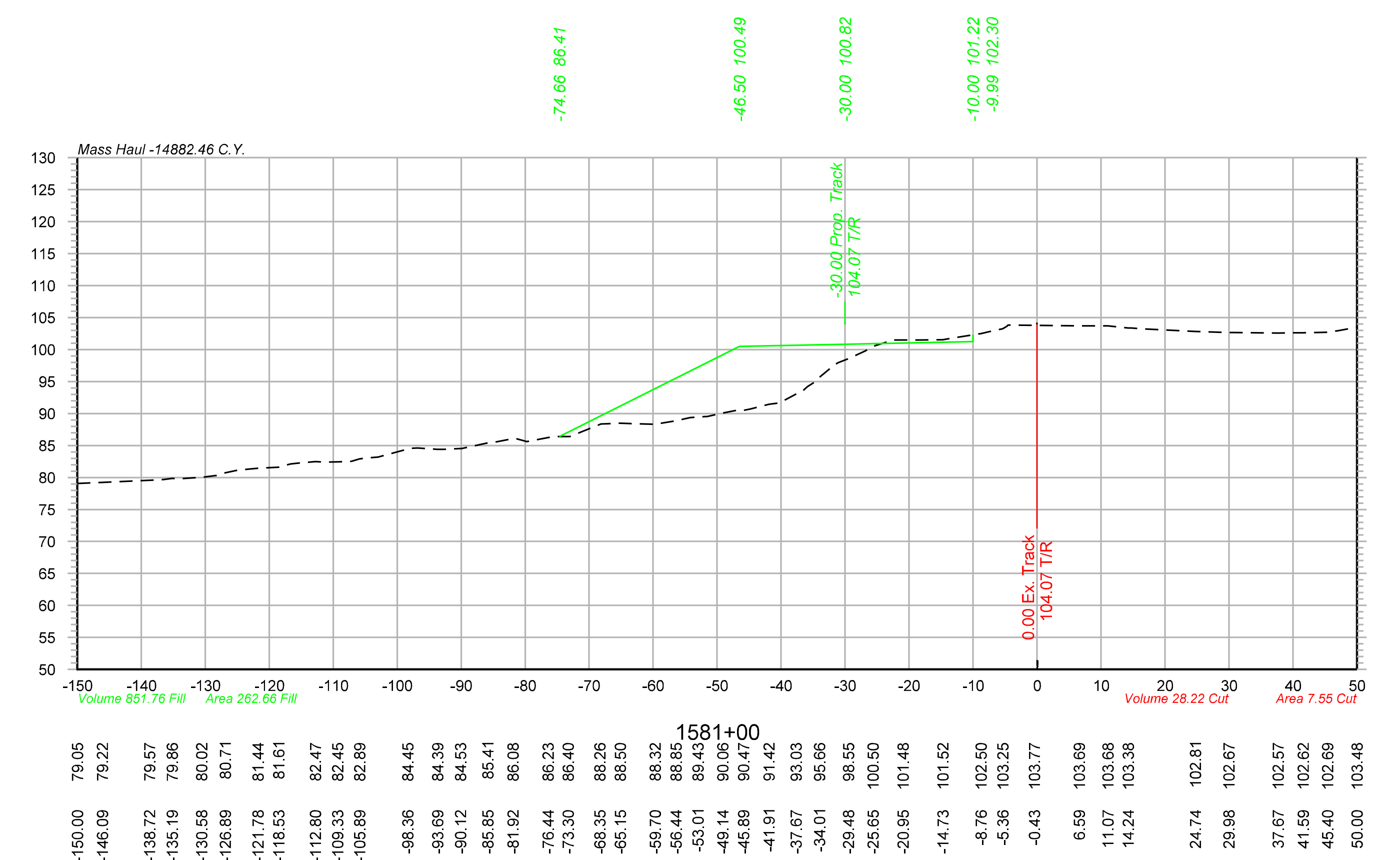
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 047 of 139	SHEET TITLE: CROSS SECTIONS STA.1576+00 TO STA.1578+00







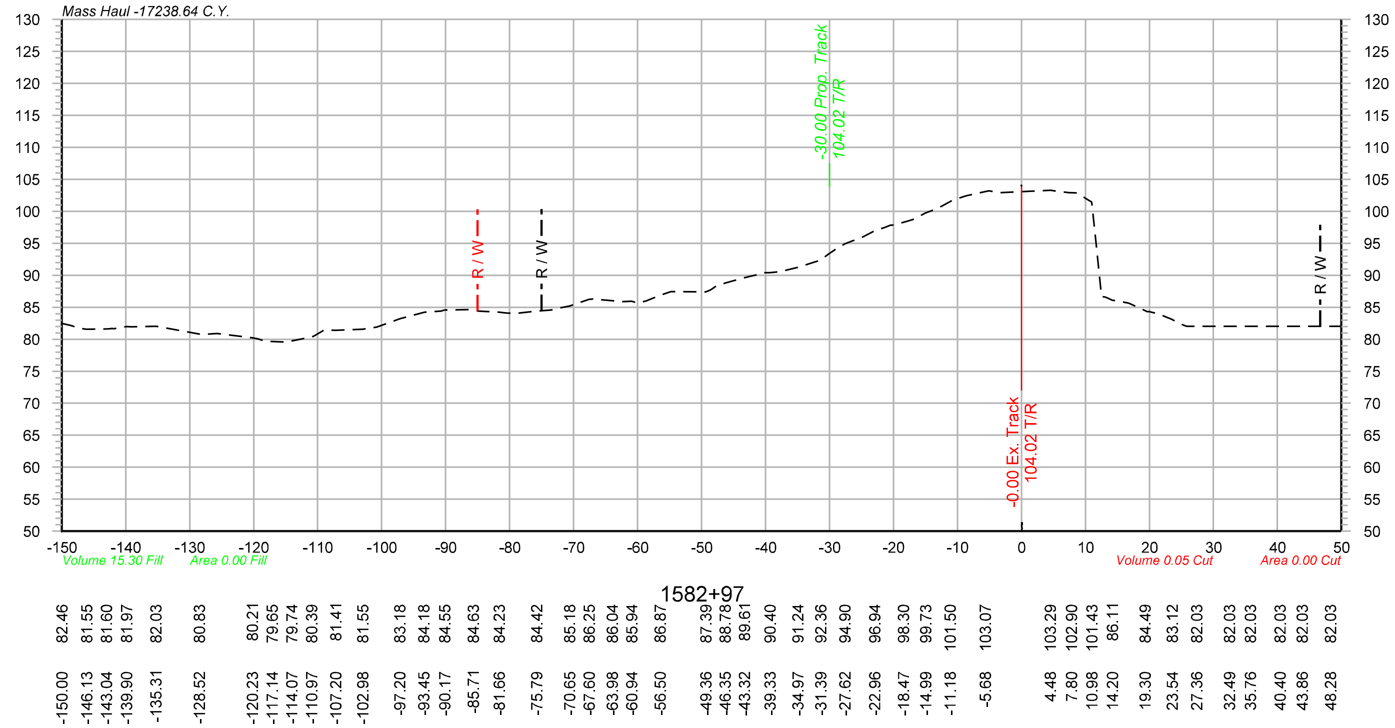


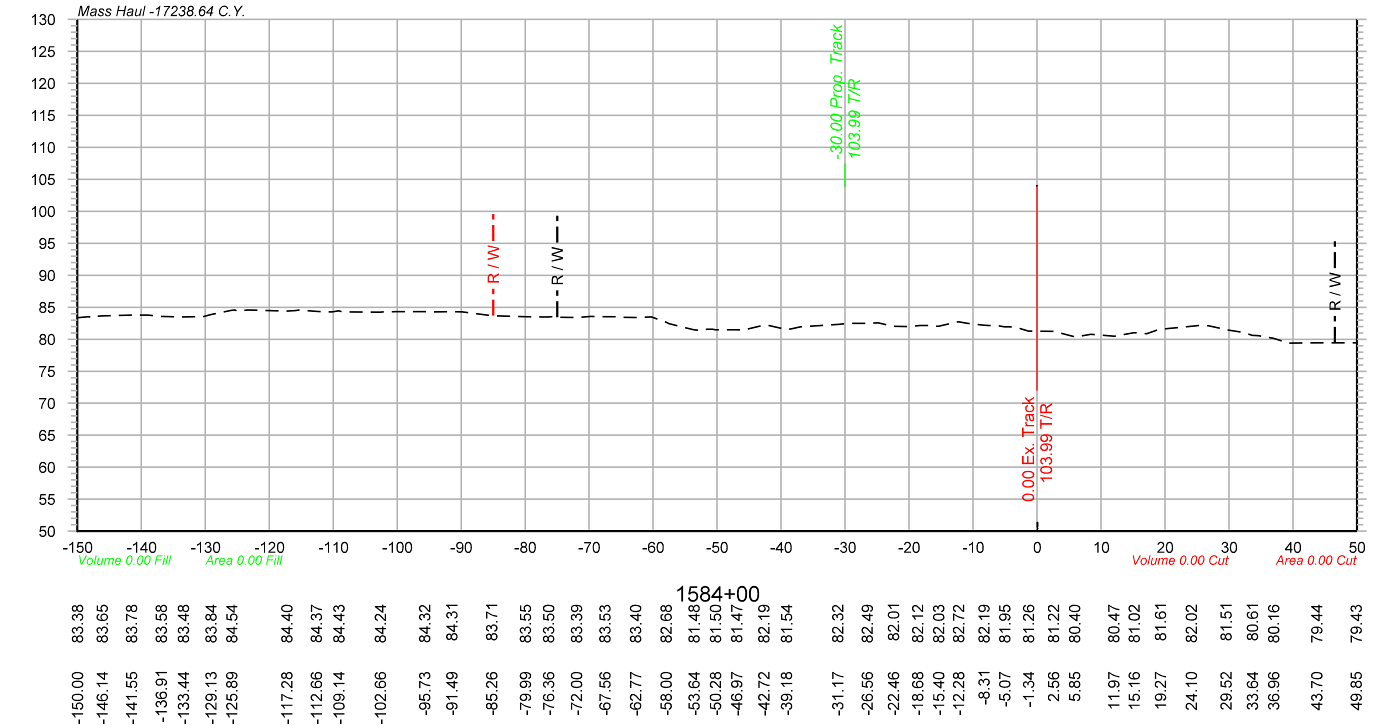
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

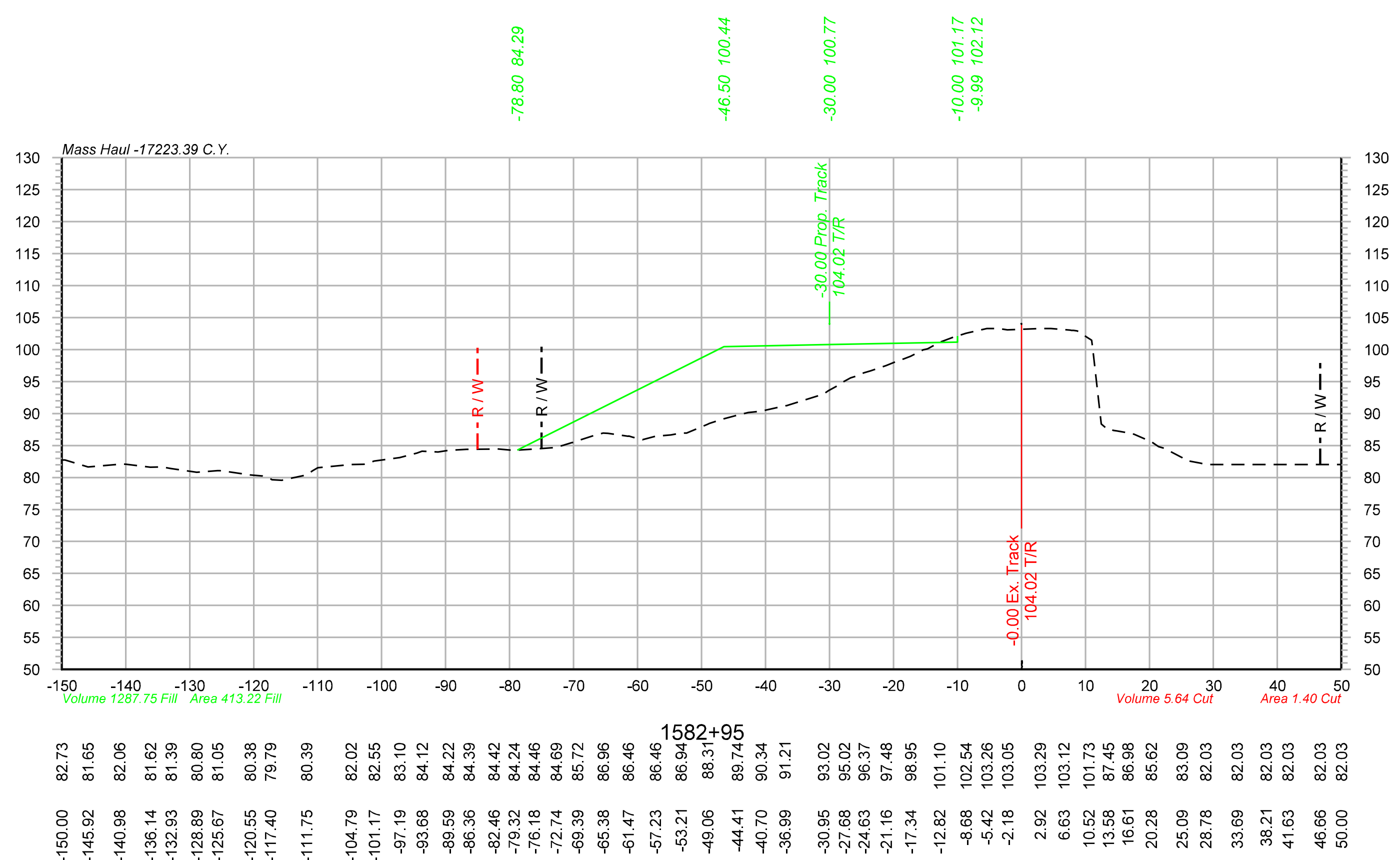
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

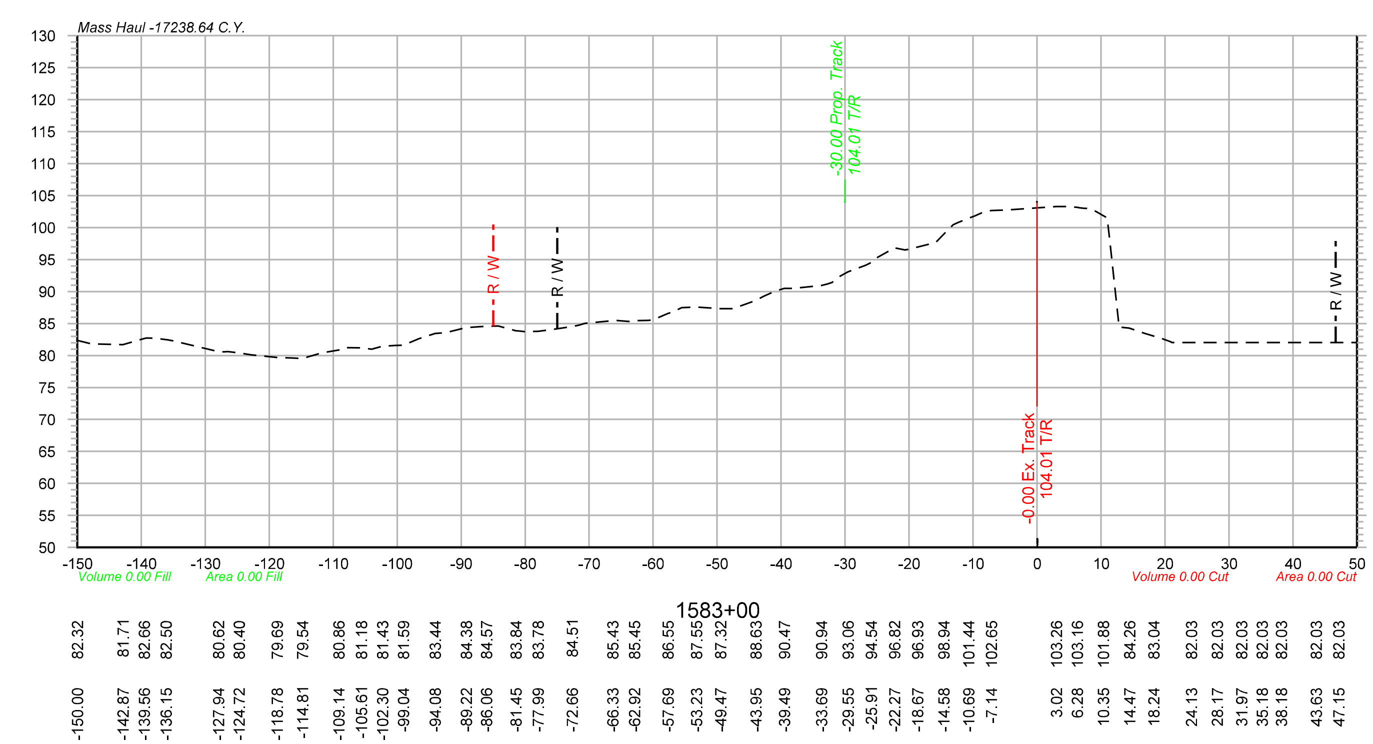
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 048 of 139	SHEET TITLE: CROSS SECTIONS STA.1579+00 TO STA.1582+00









OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 049 of 139

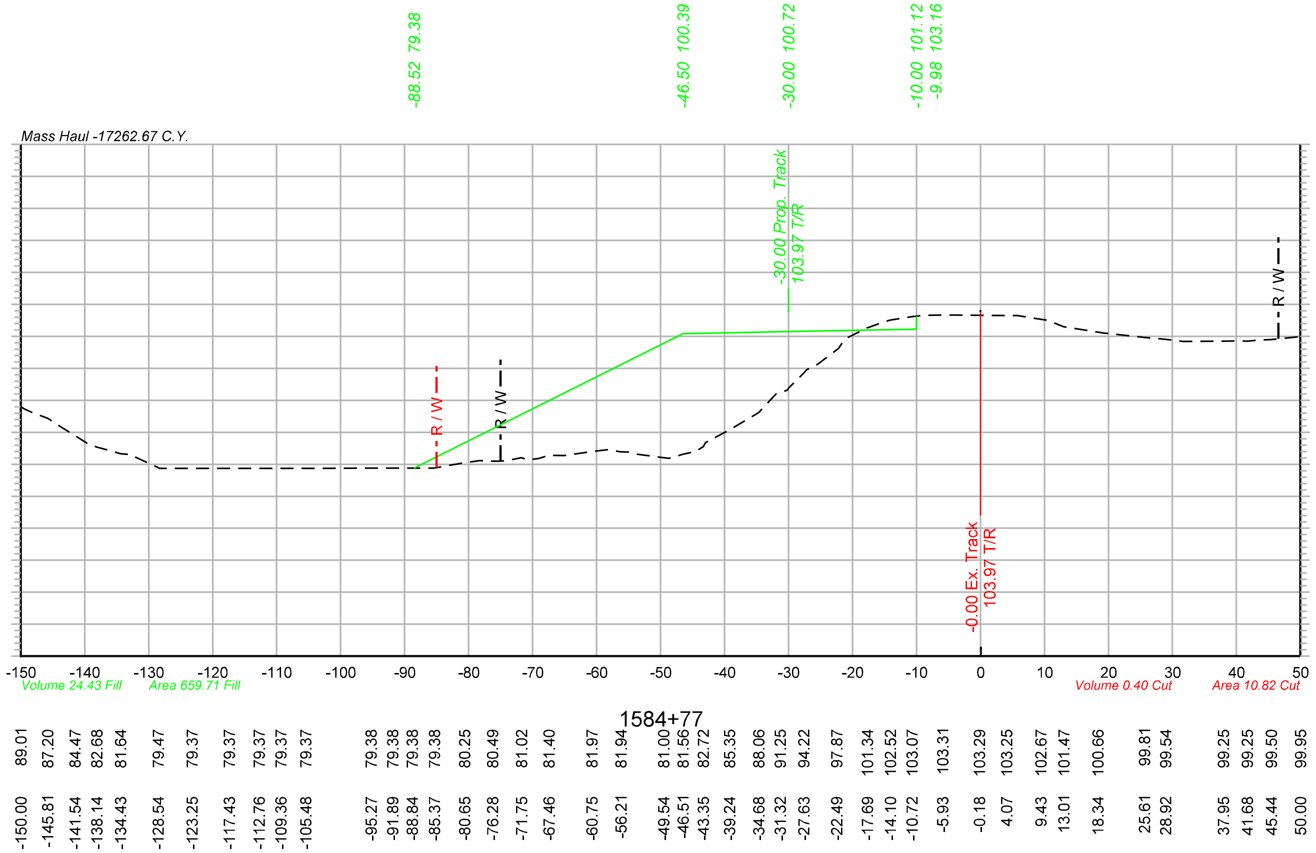
UNION PACIFIC RAILROAD

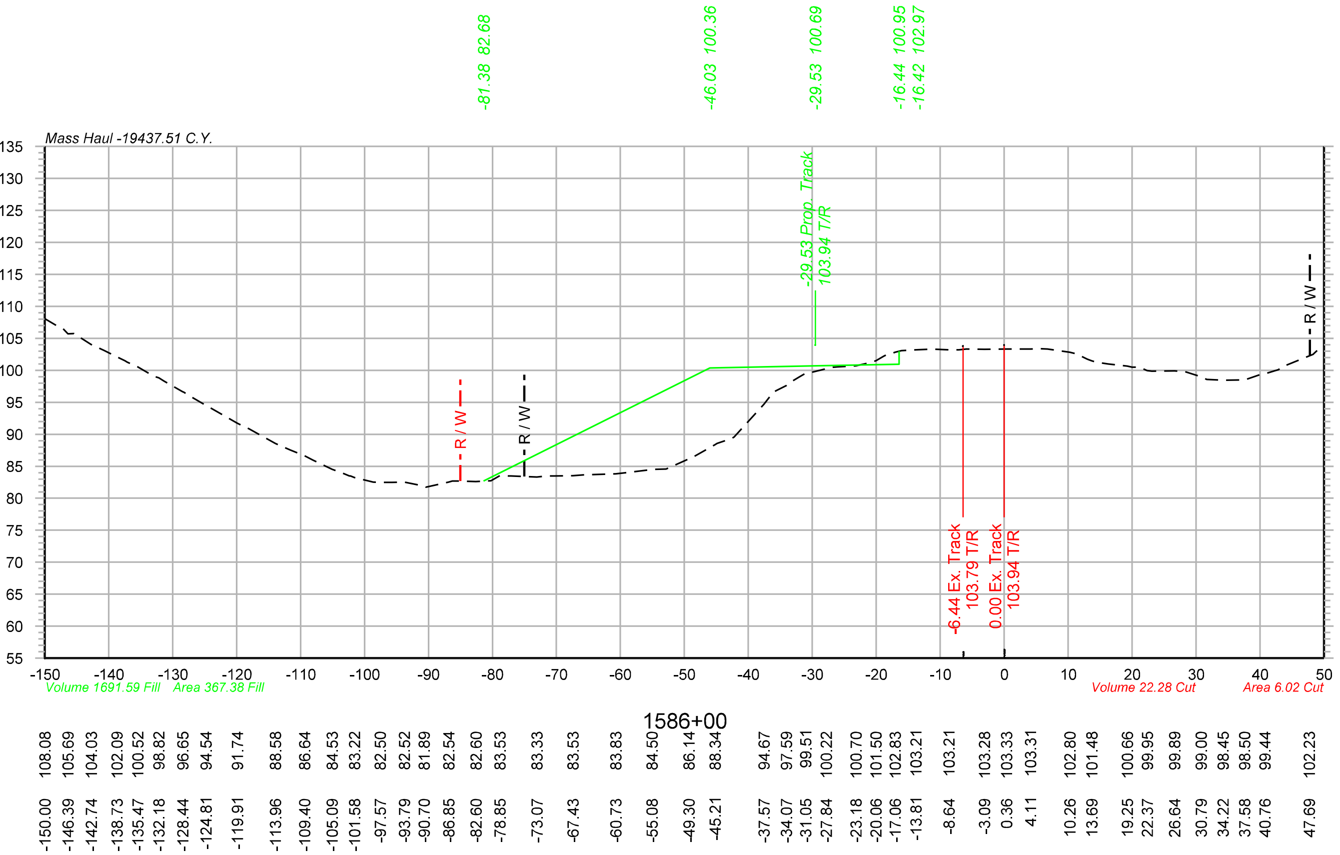
Office of Assistant Vice President
Engineering Design/Construction

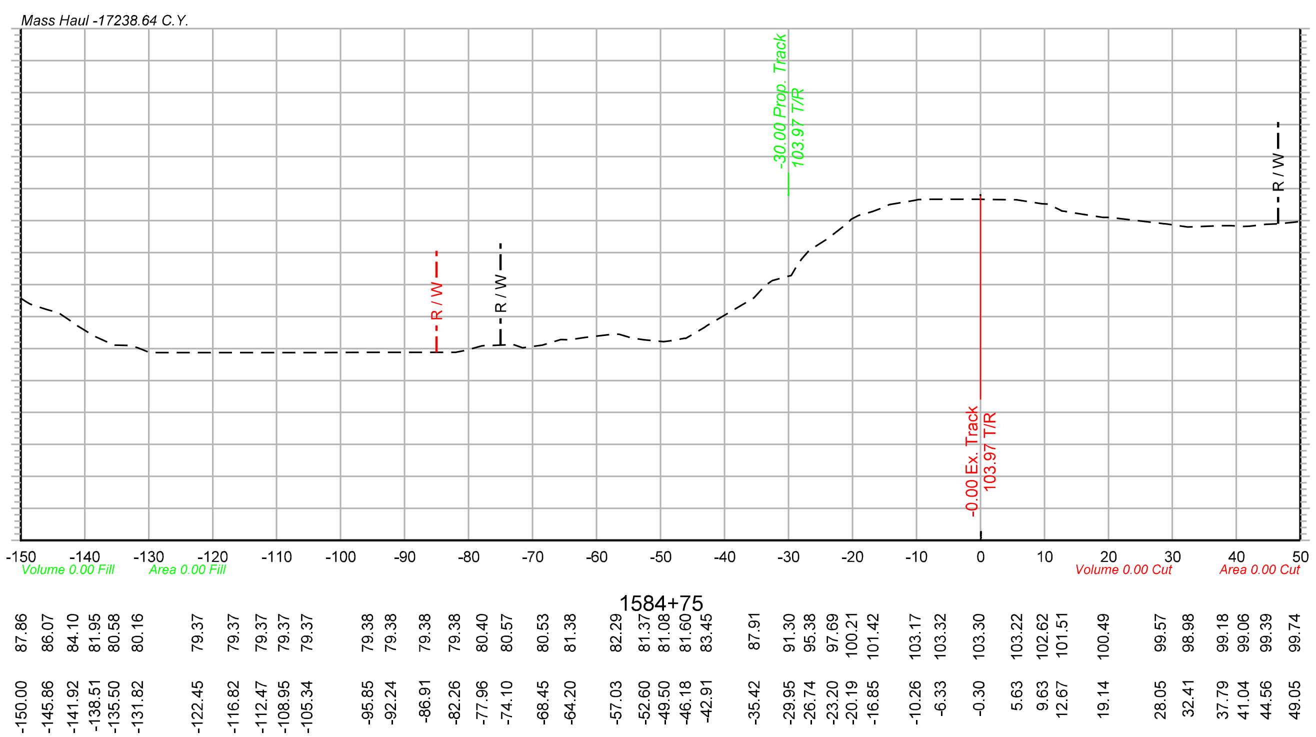
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

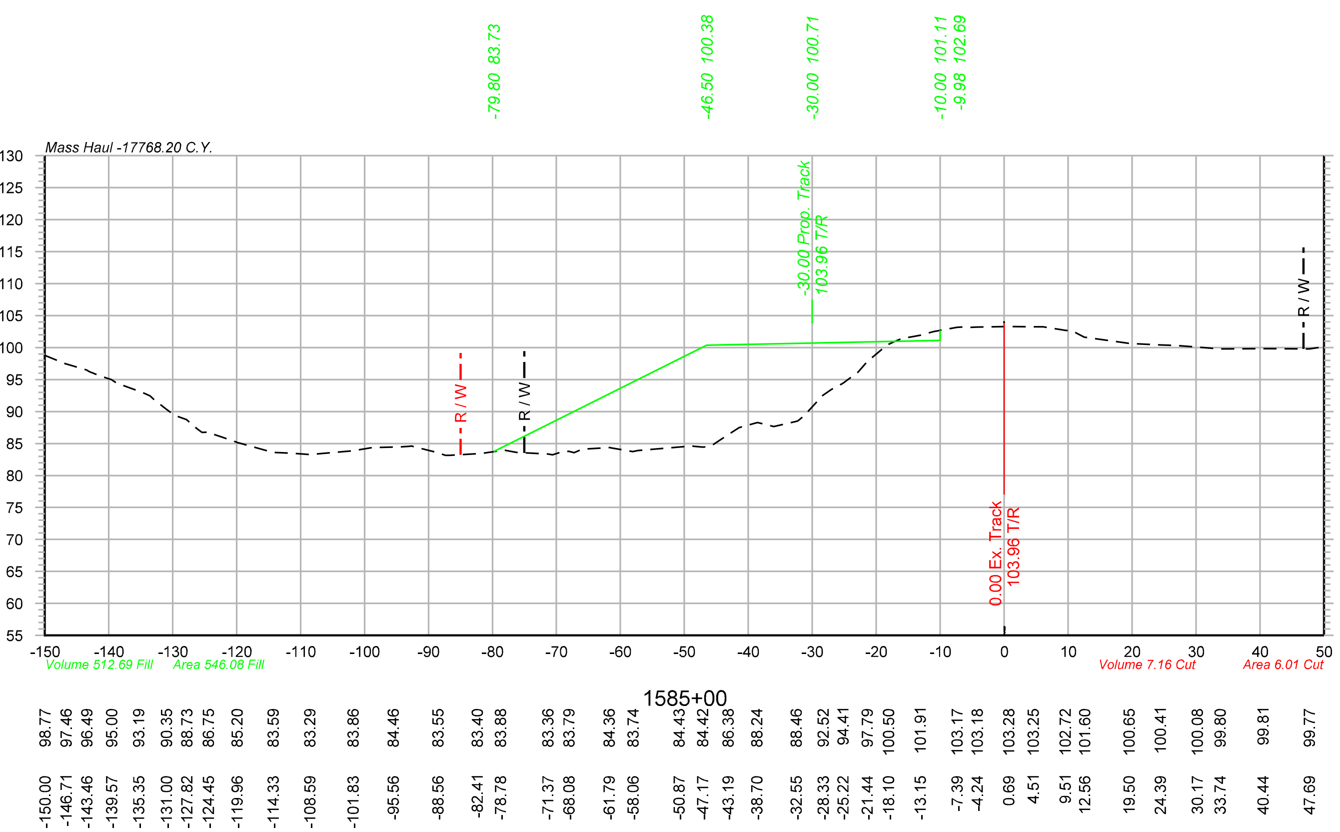
SHEET TITLE:
CROSS SECTIONS STA.1582+95 TO STA.1584+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014









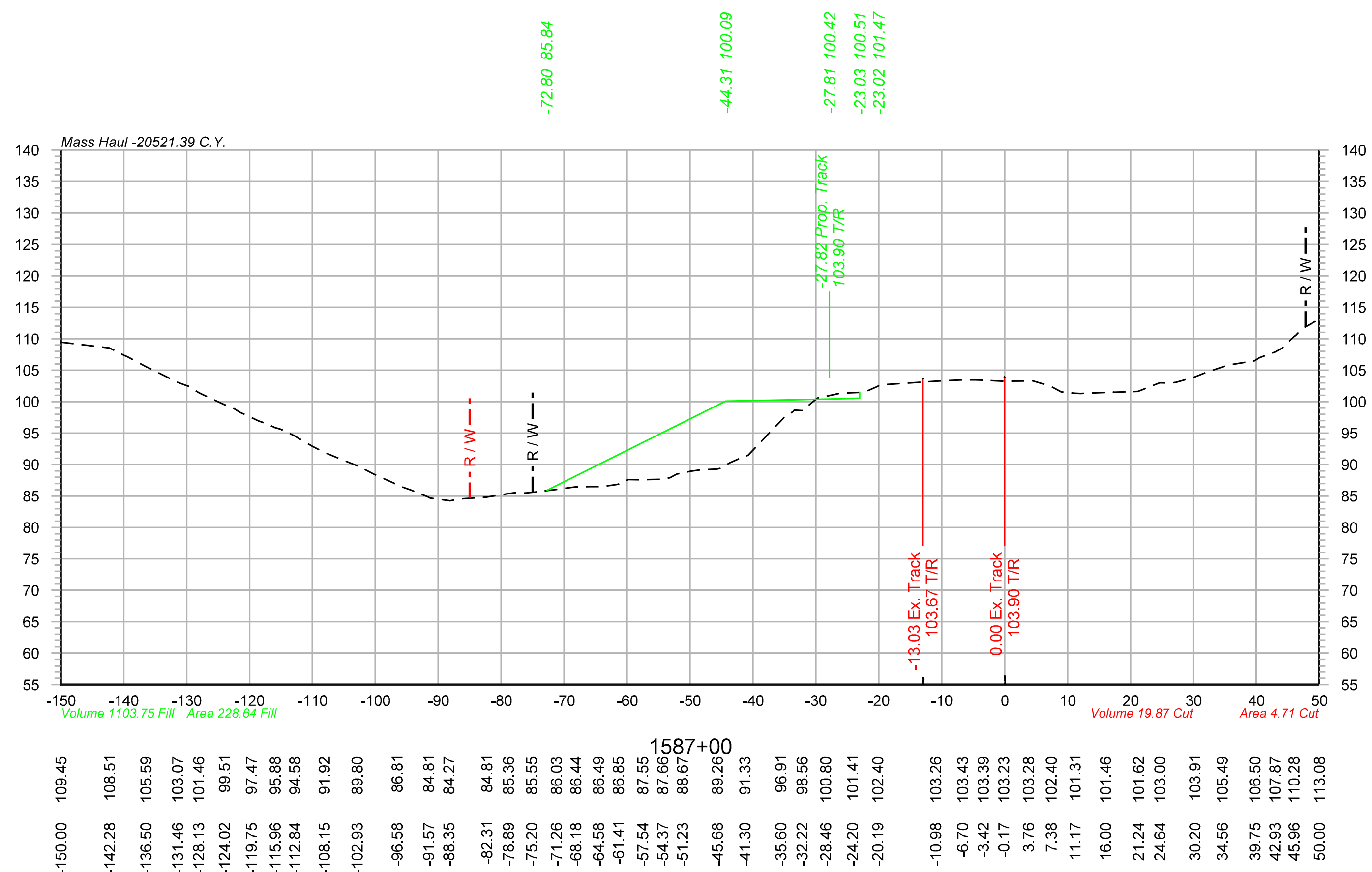
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

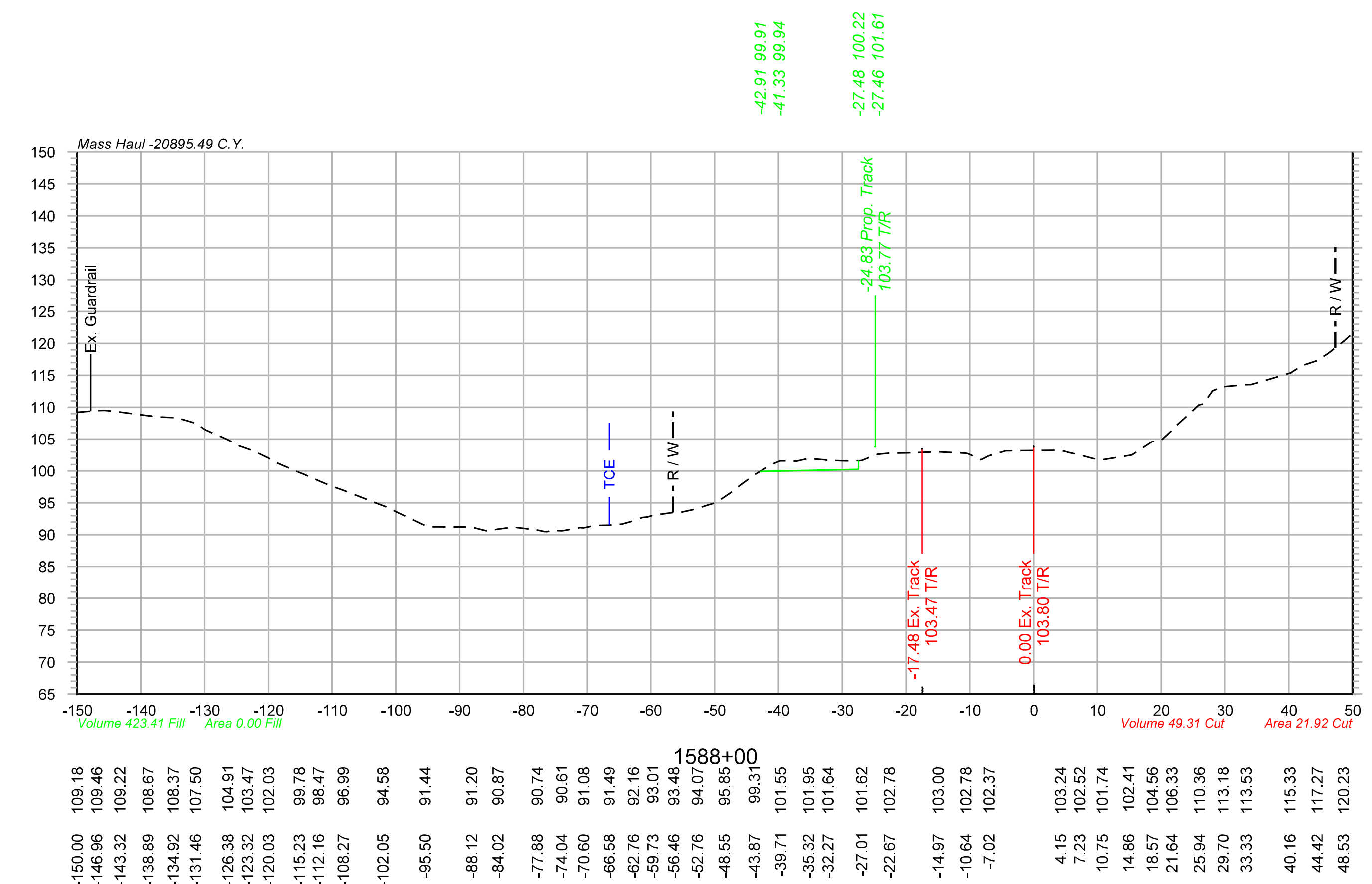
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 050 of 139	SHEET TITLE: CROSS SECTIONS STA.1584+75 TO STA.1586+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014





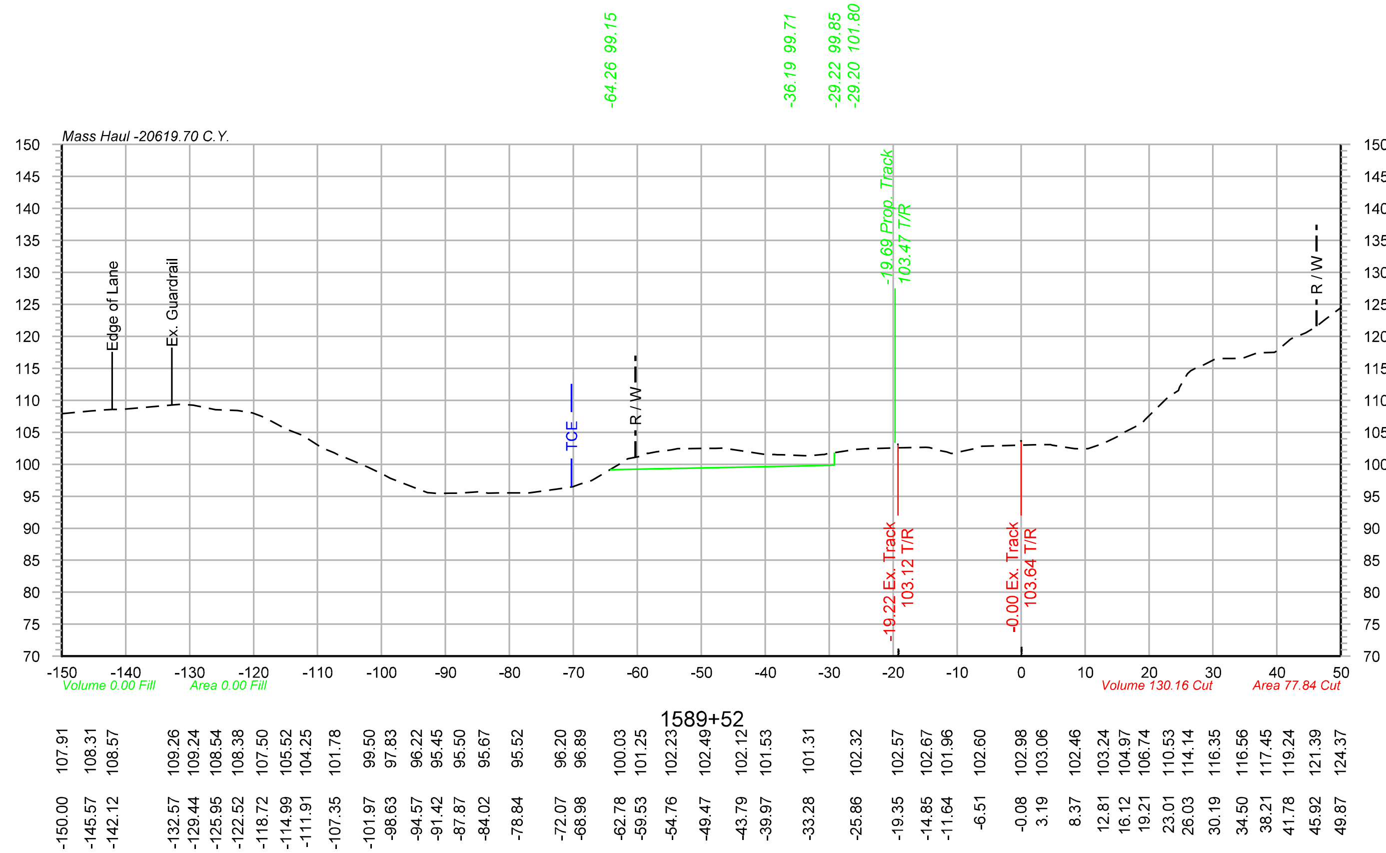
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

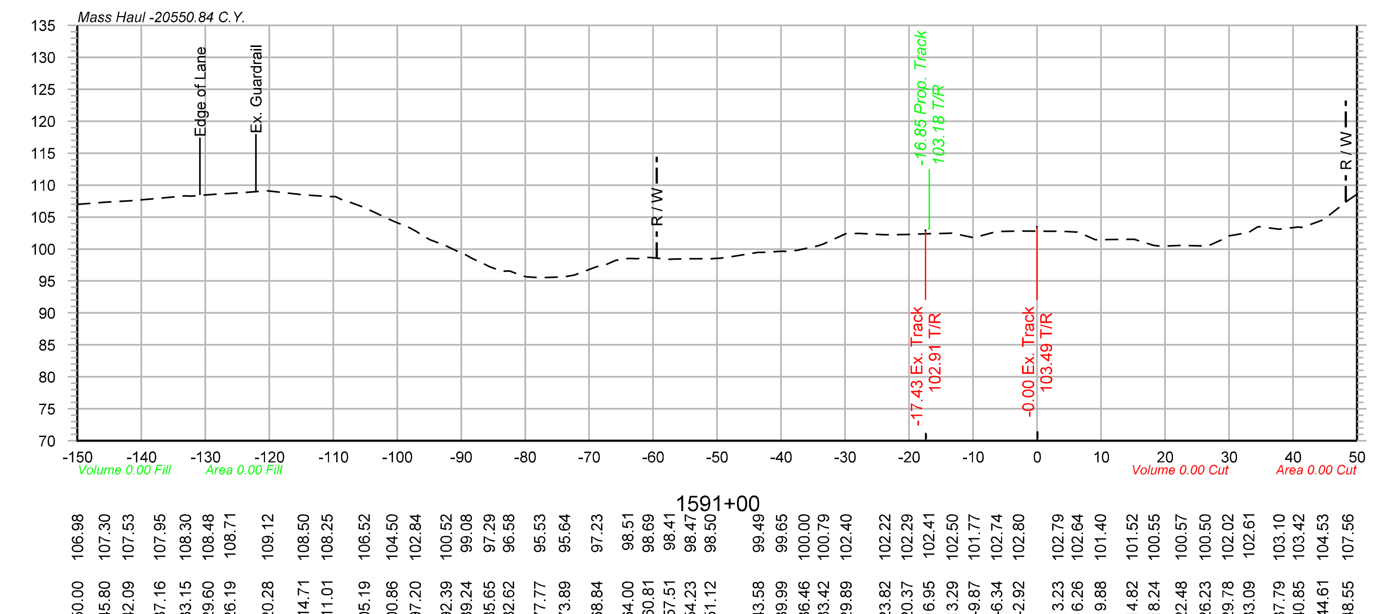
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 051 of 139

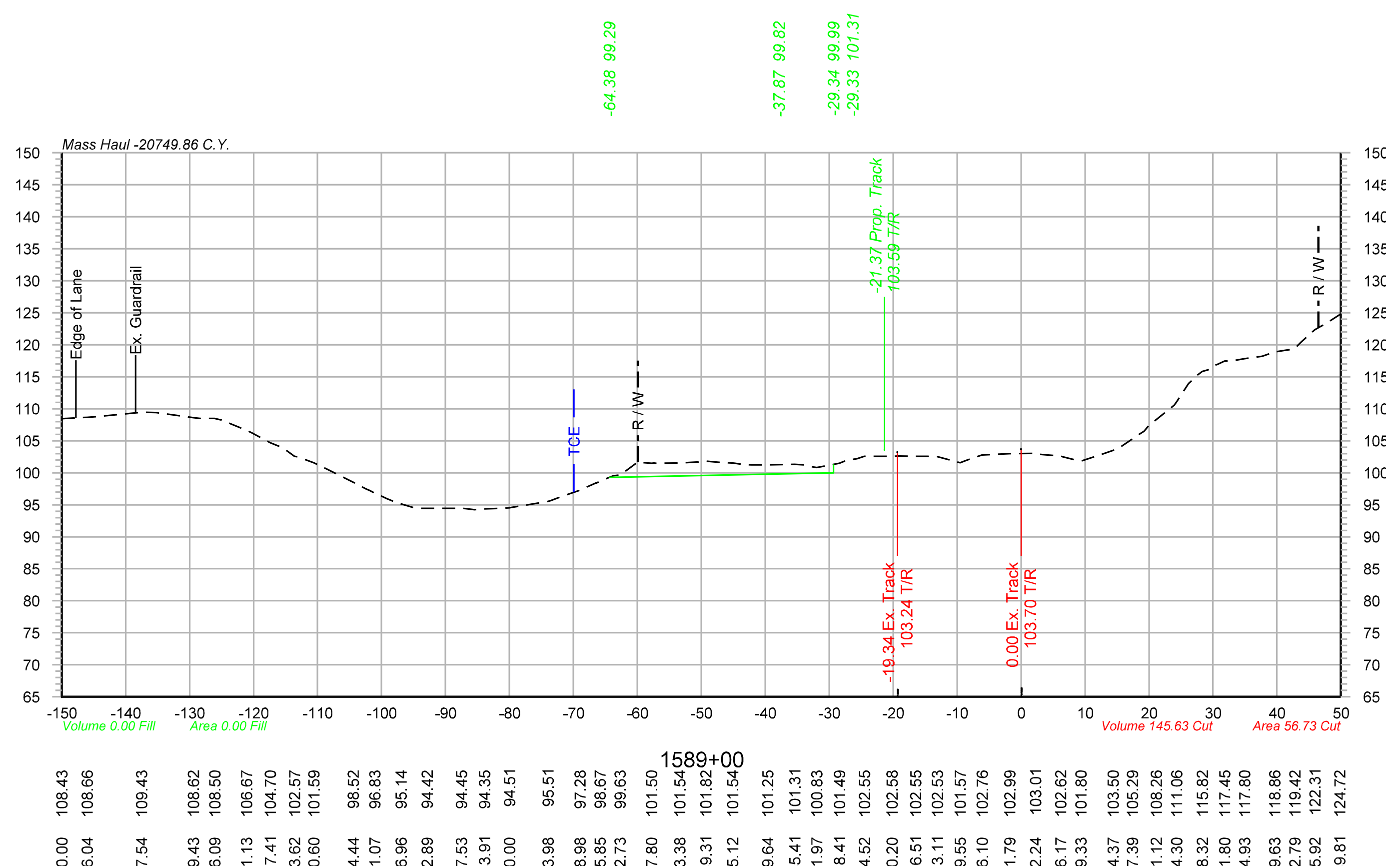
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

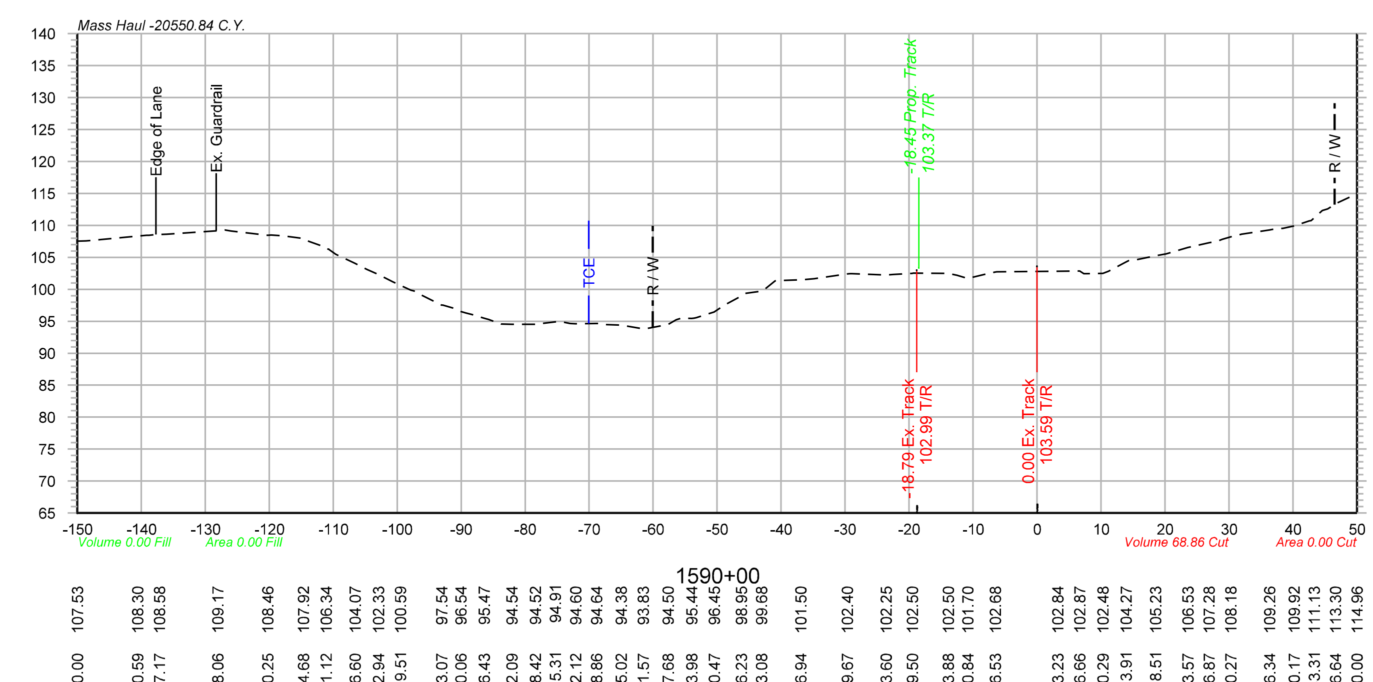
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1587+00 TO STA.1588+00









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

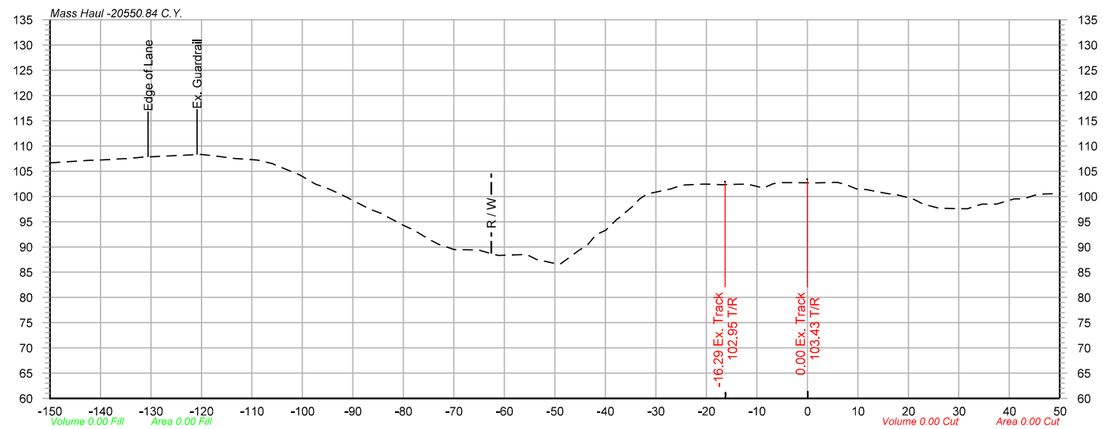
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 052 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

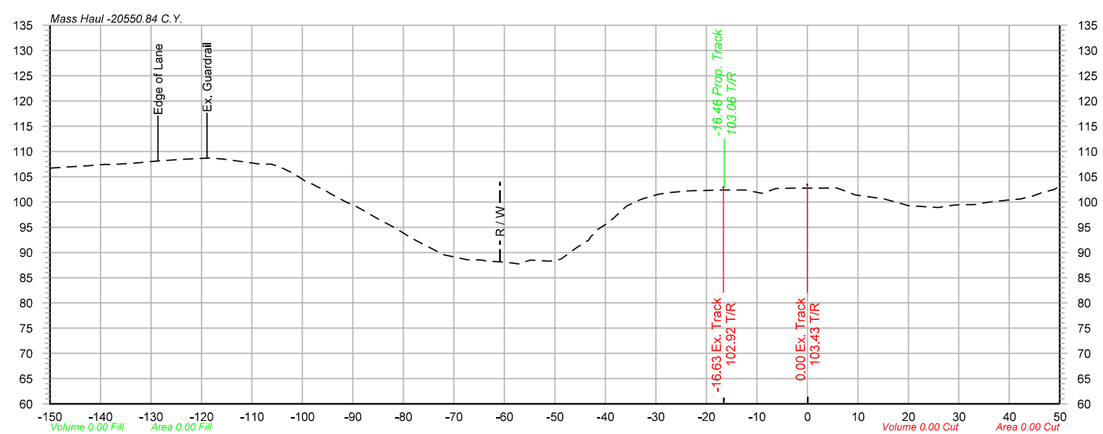
SHEET TITLE:
CROSS SECTIONS STA.1589+00 TO STA.1591+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014



1593+00

-150.00	106.66
-143.43	107.07
-140.37	107.20
-135.46	107.48
-131.61	107.77
-128.21	107.93
-120.08	108.30
-117.02	107.99
-113.51	107.52
-109.35	107.24
-105.89	106.50
-101.68	104.75
-98.49	103.07
-94.75	101.47
-88.41	98.39
-84.08	96.54
-80.42	94.49
-74.99	91.54
-69.91	89.50
-65.14	89.38
-61.16	88.32
-56.61	88.48
-50.59	86.86
-47.03	88.00
-43.79	90.28
-39.97	93.28
-36.70	96.26
-33.26	99.50
-30.22	100.82
-27.08	101.48
-21.48	102.40
-16.60	102.34
-12.08	102.42
-8.64	101.67
-3.30	102.72
1.95	102.70
5.32	102.78
9.76	101.48
16.11	100.52
20.70	99.58
26.00	97.70
30.03	97.58
33.16	98.08
37.05	98.50
41.02	99.54
45.79	100.48
50.00	100.57



1592+00

-150.00	106.69
-146.83	106.91
-142.05	107.21
-139.02	107.45
-133.67	107.66
-129.54	108.04
-124.92	108.35
-121.21	108.57
-117.67	108.73
-112.91	108.10
-108.33	107.51
-104.39	106.92
-101.33	105.37
-98.02	103.54
-94.30	101.57
-90.48	99.55
-87.21	97.93
-83.10	95.67
-78.20	92.73
-74.02	90.56
-68.78	88.87
-64.81	88.51
-59.67	88.06
-56.57	87.93
-52.71	88.37
-48.77	88.70
-43.83	92.14
-40.13	95.43
-36.72	98.40
-32.98	100.48
-29.63	101.49
-23.55	102.20
-20.17	102.28
-17.03	102.35
-12.28	102.37
-9.13	101.75
-2.93	102.74
3.25	102.75
7.44	102.21
13.91	100.78
18.58	99.69
25.82	98.90
29.20	99.40
33.07	99.50
40.36	100.46
44.38	101.06
48.80	102.42

See Sheet X139 For Earthwork Quantities

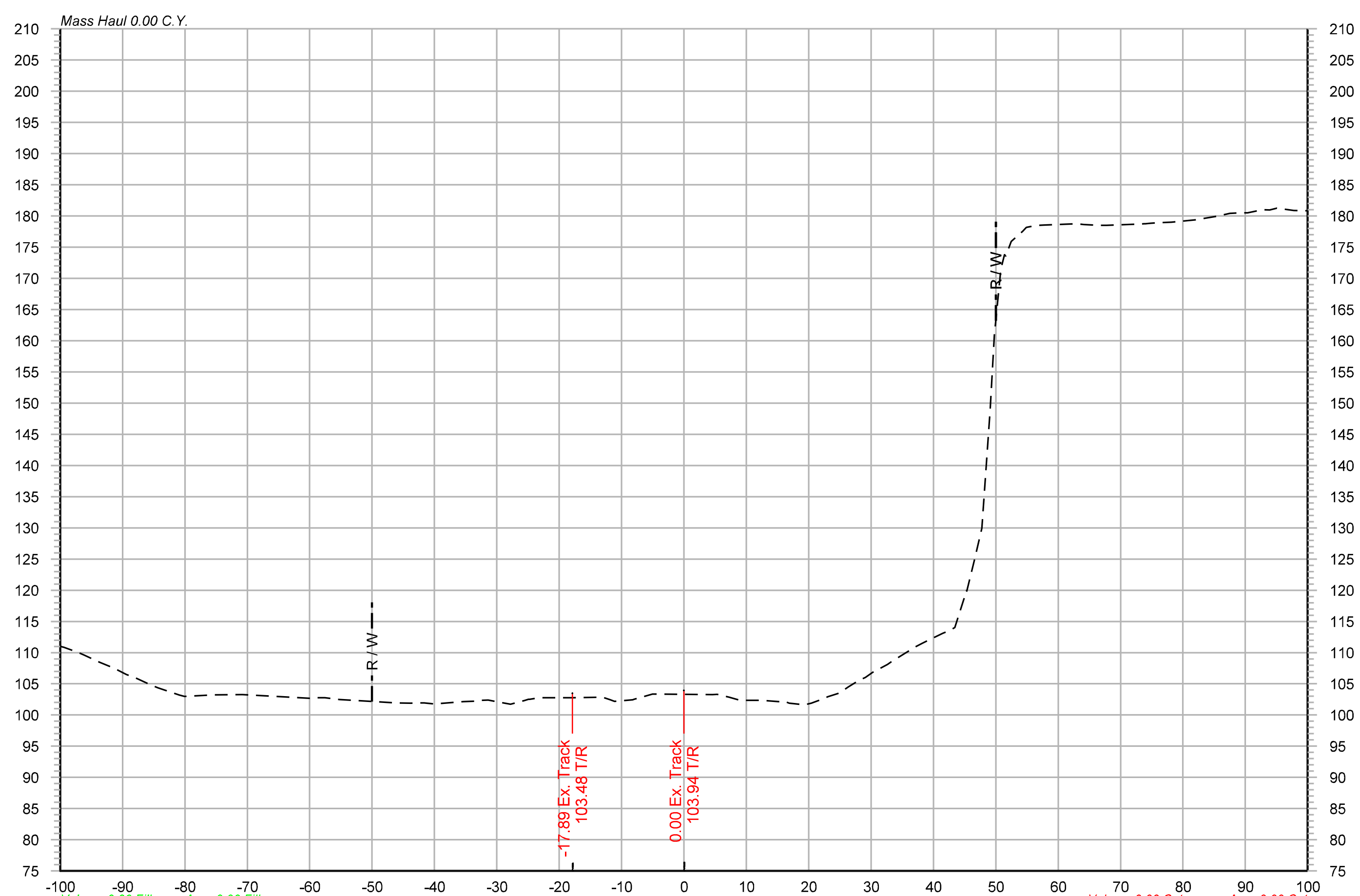
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

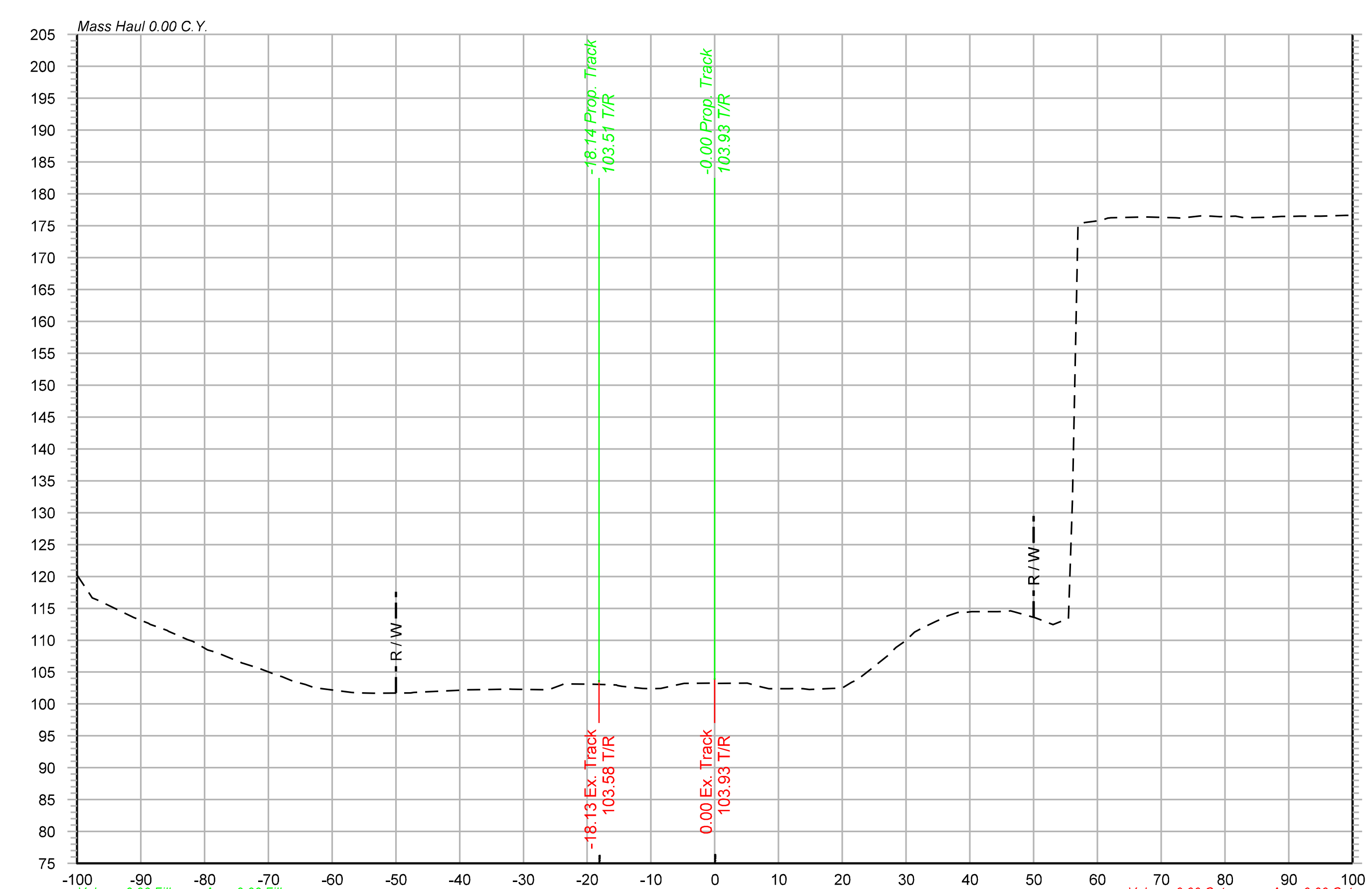
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon; Portland Subdivision MP 66.98 to MP 72.35; Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 053 of 139	SHEET TITLE: CROSS SECTIONS STA.1592+00 TO STA.1593+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55173\uprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\20_Mosier West\Design\DGN\Sheets\07_X-Sections\067070-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



Offset	Elevation
-100.00	111.08
-96.16	109.62
-91.40	107.51
-88.08	106.03
-85.01	104.63
-80.88	103.20
-75.36	103.22
-70.97	103.26
-65.40	102.99
-59.38	102.66
-55.22	102.49
-49.53	102.13
-46.20	101.92
-42.95	101.94
-35.37	102.13
-31.40	102.41
-27.82	101.75
-24.70	102.52
-17.83	102.79
-13.13	102.84
-8.20	102.44
-5.04	103.34
4.58	103.26
9.00	102.37
12.45	102.37
15.93	102.26
19.20	101.66
23.10	102.94
26.40	104.53
30.20	106.81
33.43	108.66
37.12	110.93
41.51	113.11
44.95	118.74
49.10	148.98
52.47	175.90
55.51	178.31
62.96	178.75
66.46	178.48
73.22	178.69
78.14	179.00
81.98	179.38
85.48	179.94
89.13	180.50
92.80	180.99
97.79	180.86



Offset	Elevation
-100.00	120.23
-96.91	116.35
-93.69	114.83
-88.80	112.63
-85.67	111.41
-81.85	109.83
-78.19	108.10
-74.32	106.52
-69.42	104.82
-66.10	103.56
-62.85	102.56
-56.94	101.82
-53.48	101.68
-47.68	101.74
-40.16	102.14
-35.26	102.29
-31.72	102.32
-26.22	102.22
-19.24	103.09
-15.40	102.96
-11.29	102.44
-6.76	102.81
-0.21	103.25
5.11	103.26
8.50	102.39
11.68	102.41
14.82	102.29
18.36	102.46
21.44	103.39
27.16	107.61
31.32	111.26
34.65	112.93
38.12	114.35
44.33	114.50
50.24	113.52
55.23	113.33
60.58	175.82
65.75	176.35
72.32	176.26
76.21	176.54
79.23	176.40
83.03	176.27
86.84	176.35
90.35	176.47
95.04	176.49
99.03	176.62

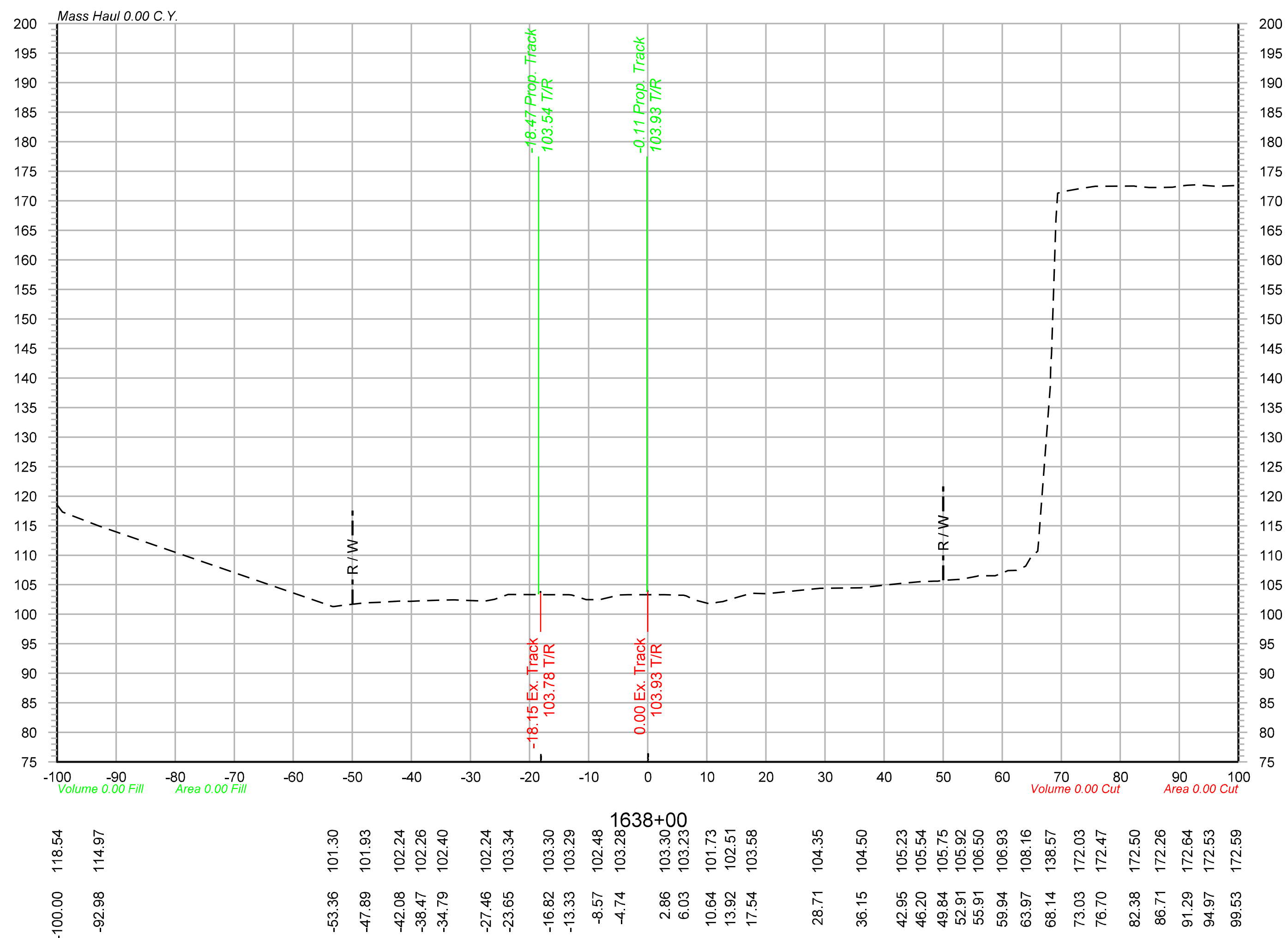
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

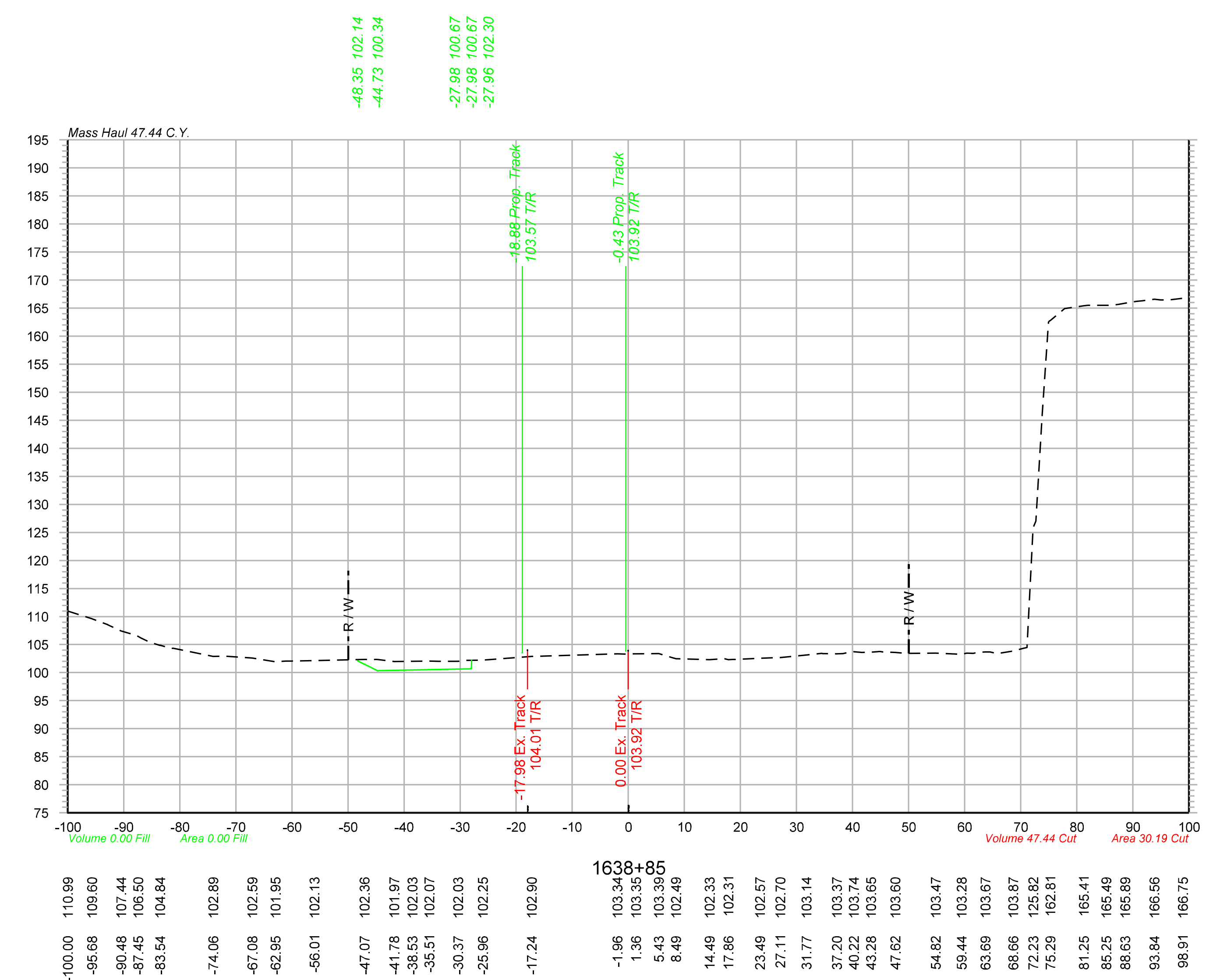
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 054 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1636+00 TO STA.1637+00





Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

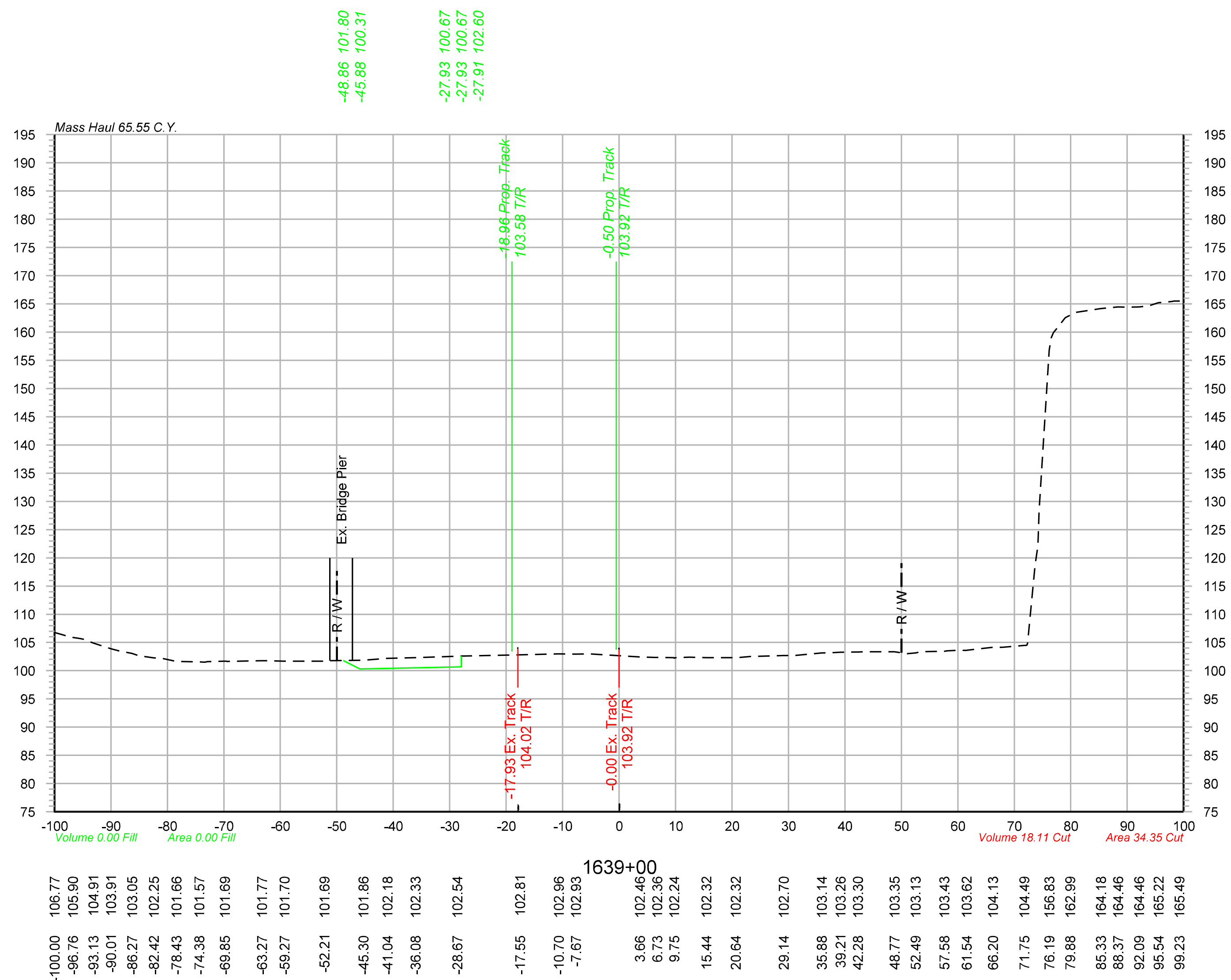
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 055 of 139

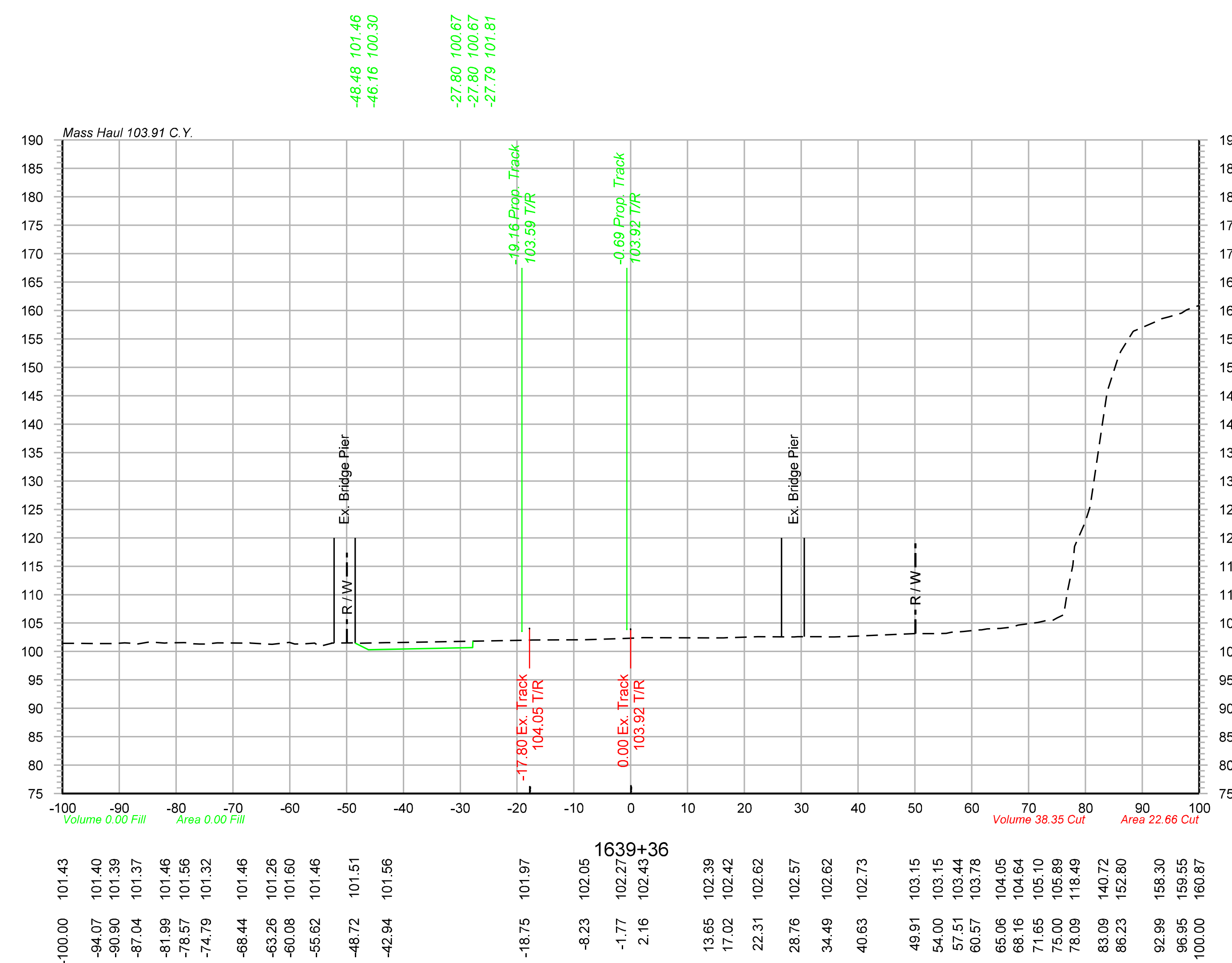
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1638+00 TO STA.1638+85

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

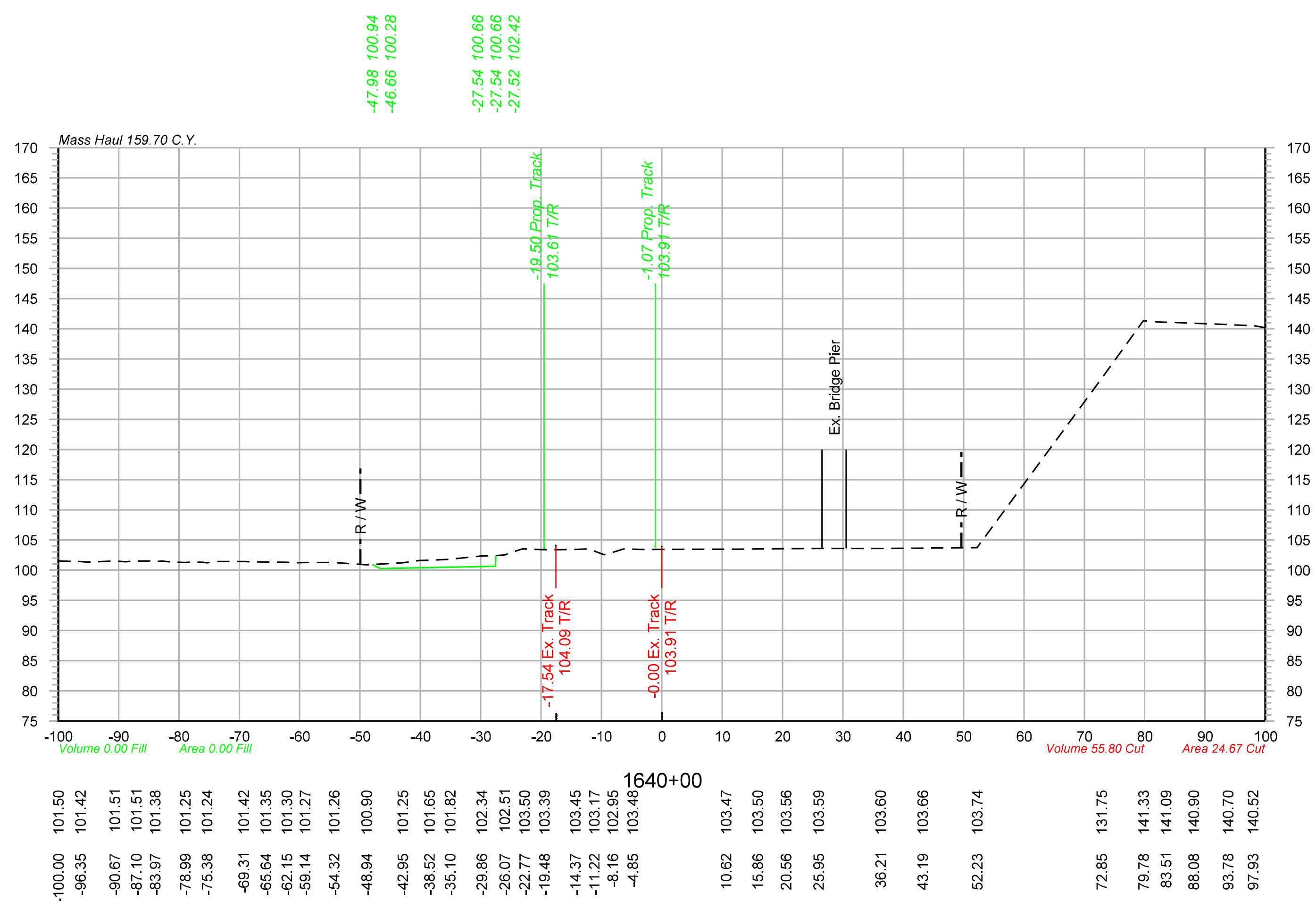


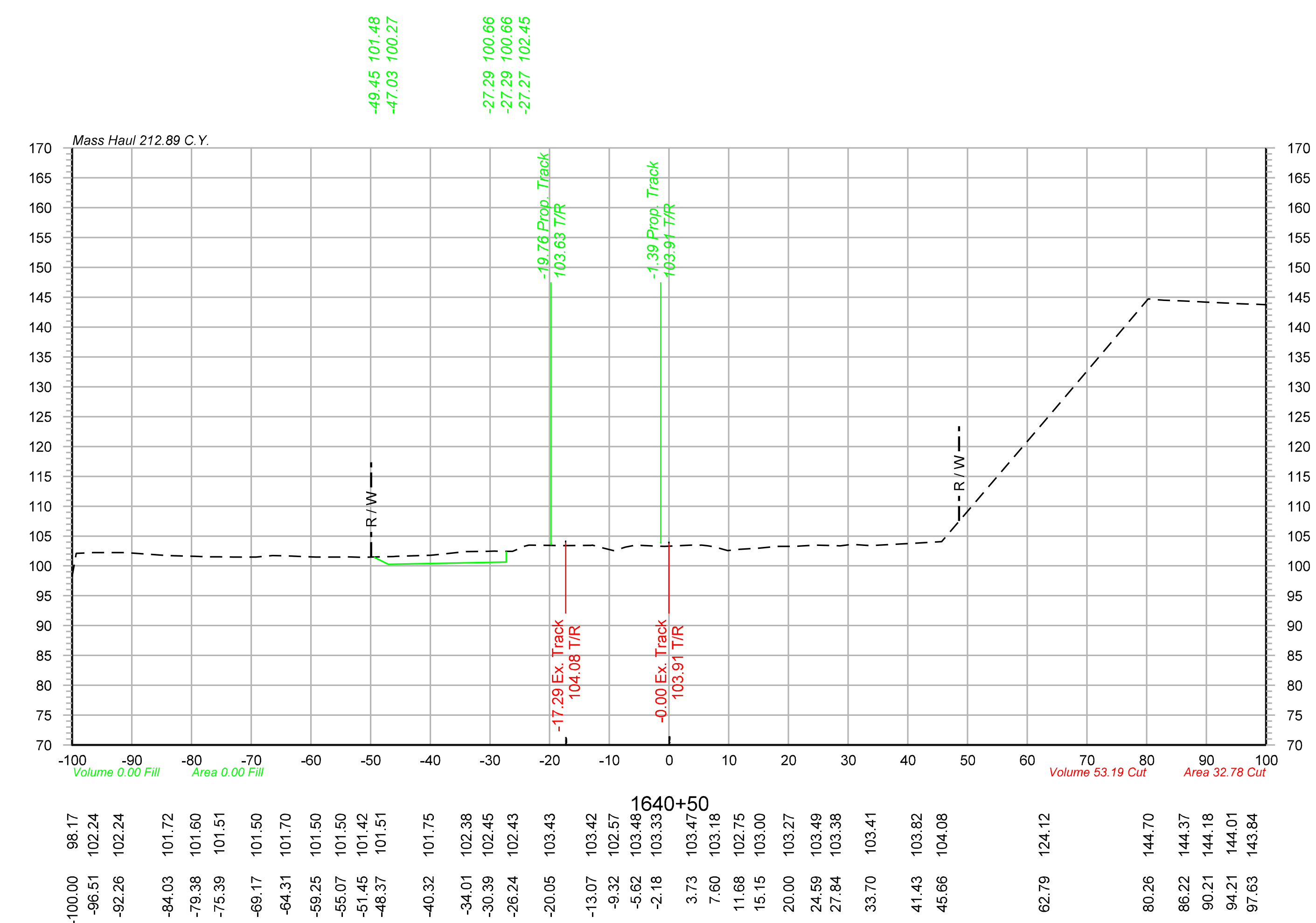


OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 056 of 139	SHEET TITLE: CROSS SECTIONS STA.1639+00 TO STA.1639+36





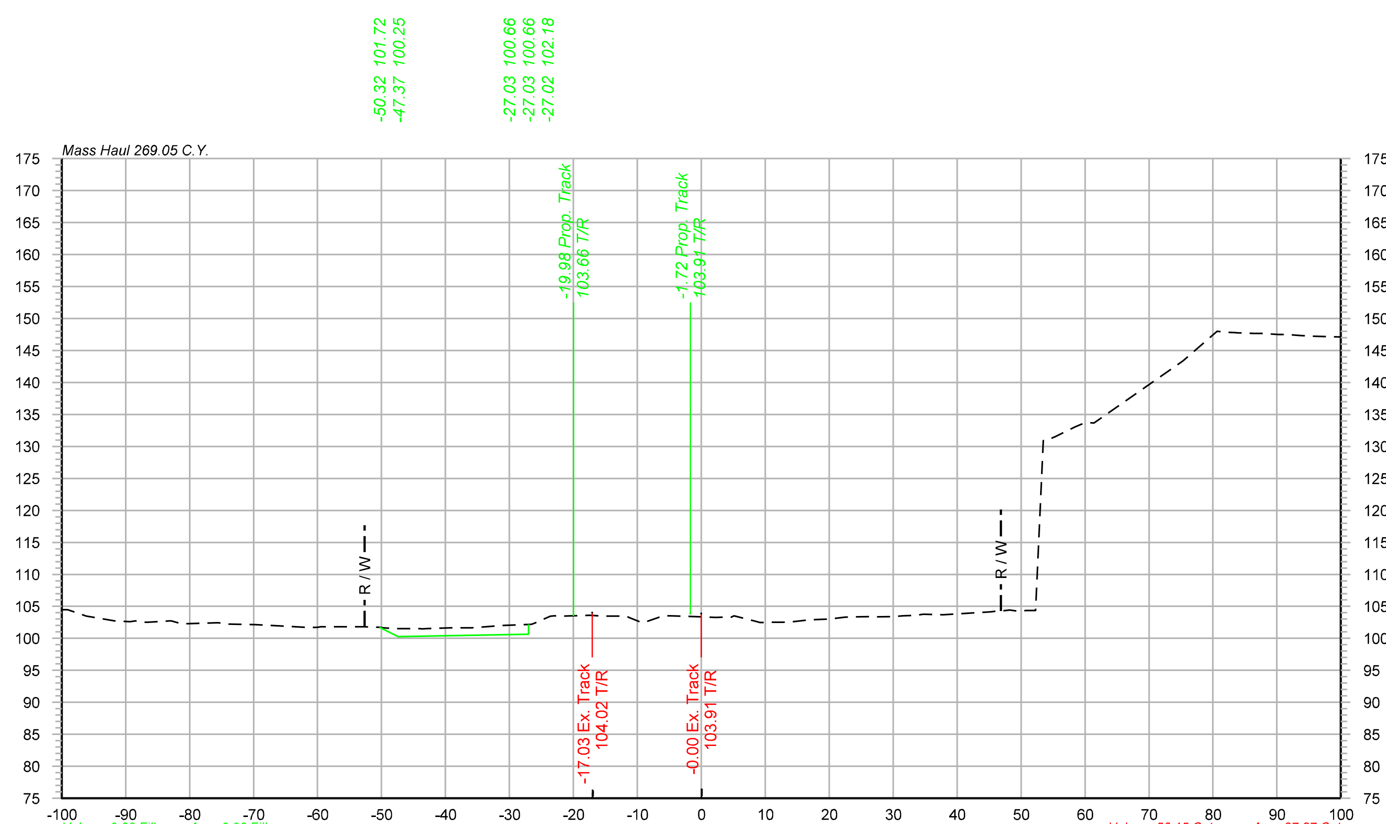
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES

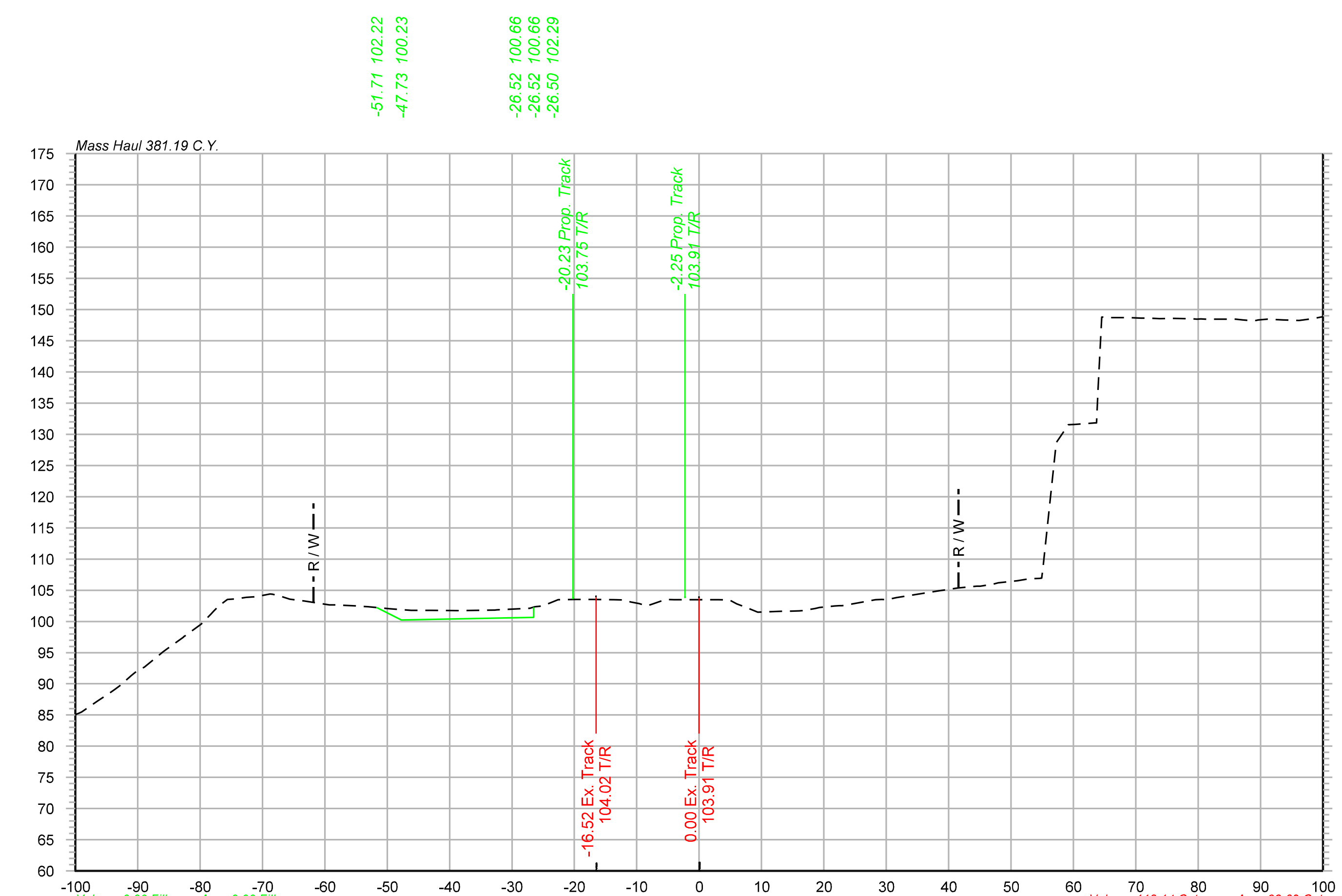
2111 South 67th Street, Suite 200, Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 057 of 139	SHEET TITLE: CROSS SECTIONS STA.1640+00 TO STA.1640+50



Elevation	Offset
104.45	-100.00
103.75	-96.87
102.74	-91.76
102.72	-88.50
102.65	-84.39
102.28	-81.24
102.43	-75.66
102.18	-71.81
102.02	-67.33
101.75	-62.69
101.80	-59.52
101.79	-52.69
101.66	-49.66
101.50	-44.06
101.64	-39.20
101.66	-35.94
102.03	-30.99
102.20	-26.59
103.49	-23.55
103.61	-17.40
103.50	-12.70
102.49	-9.32
103.53	-5.96
103.43	-2.03
103.28	2.33
102.69	8.40
102.50	12.73
102.88	16.93
103.04	20.09
103.33	23.65
103.38	29.90
103.60	33.63
103.71	37.82
104.16	45.26
104.35	48.74
104.37	51.90
131.48	55.20
133.00	58.31
133.67	61.37
143.35	75.30
147.97	80.66
147.76	83.84
147.65	88.36
147.47	91.52
147.27	94.61
147.13	99.50



Elevation	Offset
85.06	-100.00
87.22	-96.47
89.68	-92.86
92.69	-88.90
95.61	-85.31
97.90	-82.12
101.20	-78.25
103.59	-74.32
104.13	-70.28
103.96	-66.90
103.26	-63.28
102.66	-59.29
102.50	-54.87
102.02	-49.52
101.76	-46.17
101.76	-42.91
101.72	-38.50
101.83	-33.05
102.12	-27.16
103.49	-22.61
103.52	-19.39
103.47	-13.66
102.85	-9.58
103.51	-5.34
103.50	-0.14
103.50	3.12
102.22	7.57
101.66	13.75
102.08	18.58
102.50	21.78
103.49	28.27
103.80	31.61
104.53	36.03
105.34	41.44
105.64	44.51
106.18	47.98
106.54	51.04
106.92	54.59
131.12	58.90
131.83	63.48
148.71	66.59
148.63	70.86
148.58	76.03
148.46	79.81
148.44	86.01
148.24	89.26
148.32	93.68
148.45	97.78

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

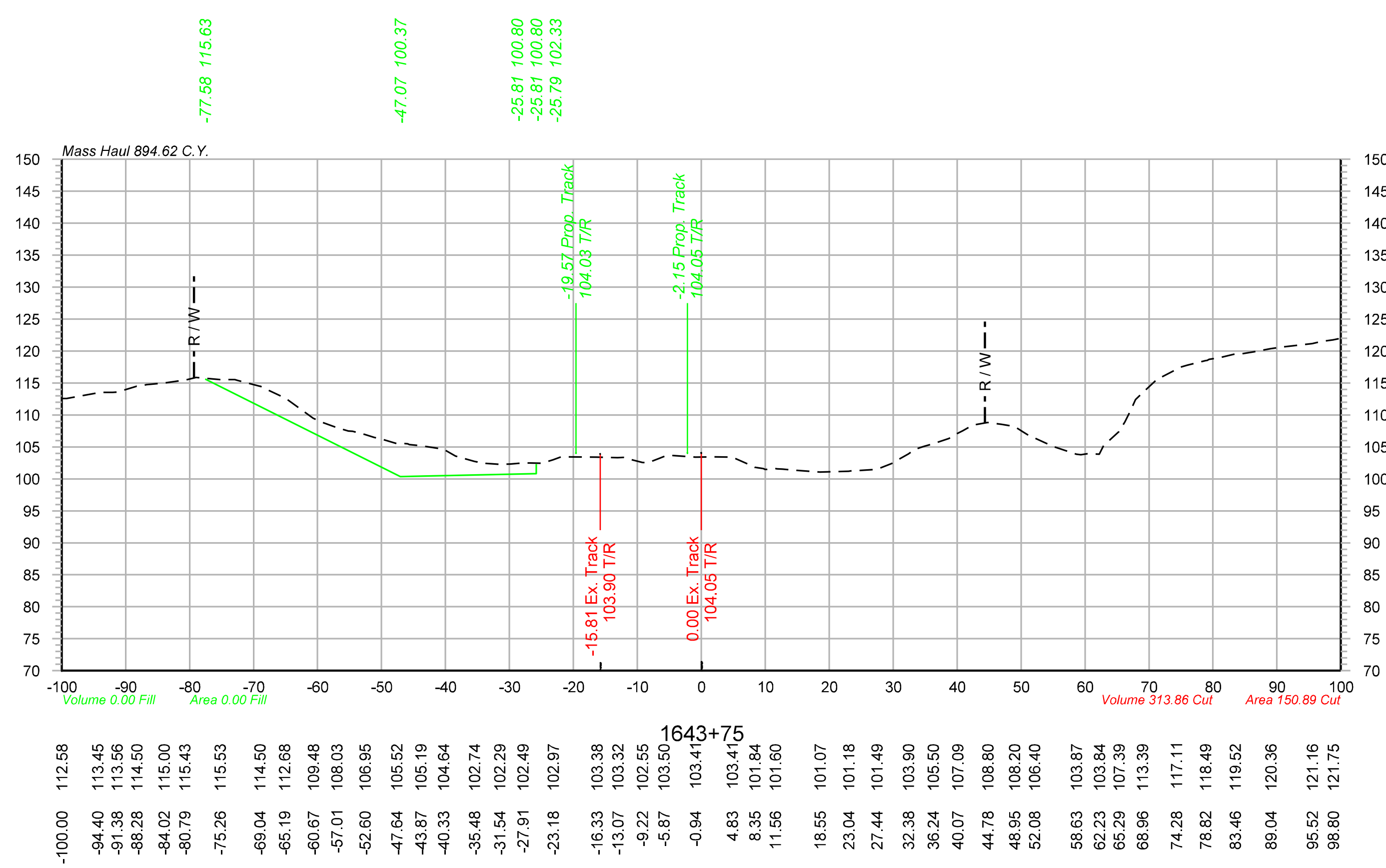
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 058 of 139

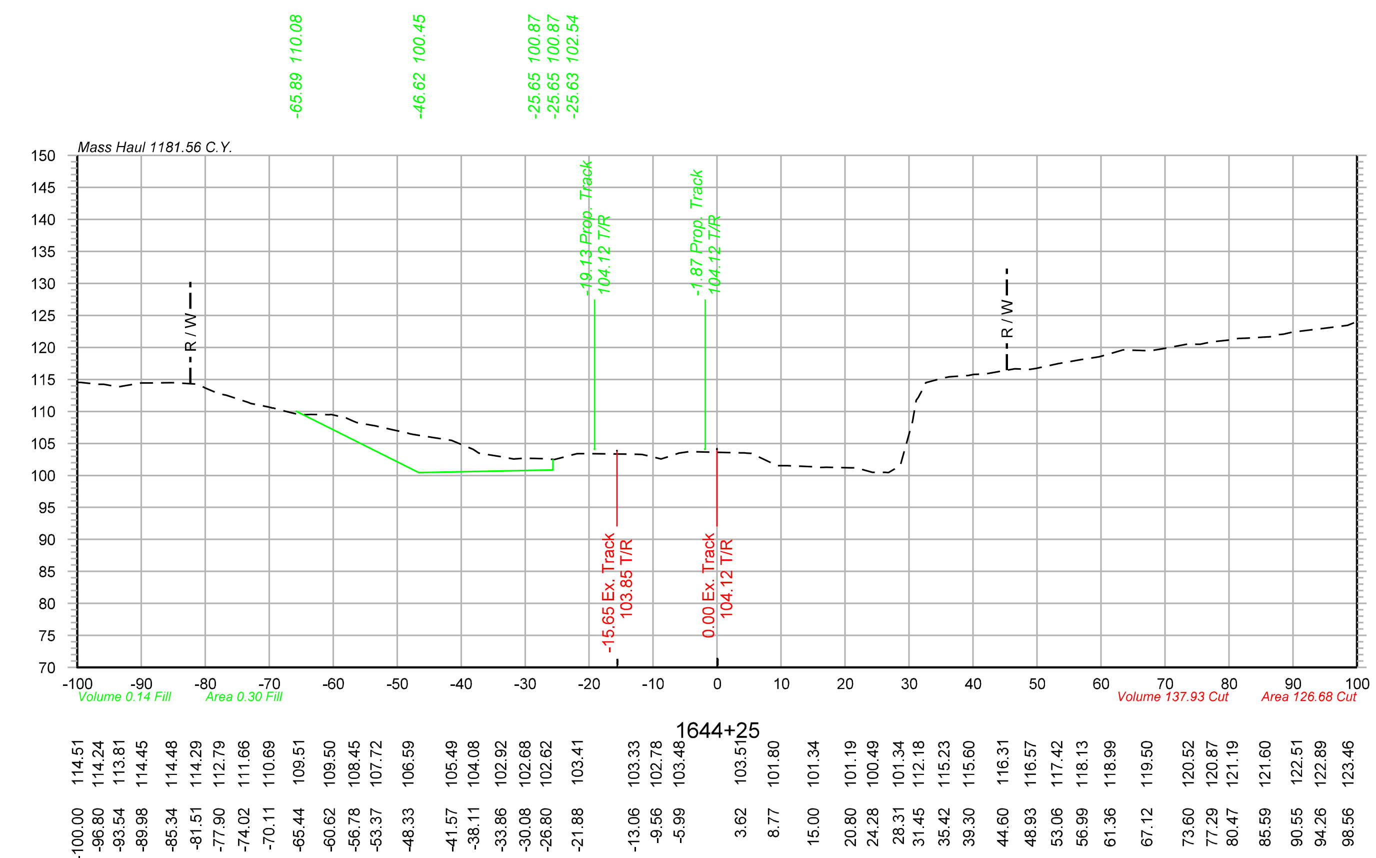
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

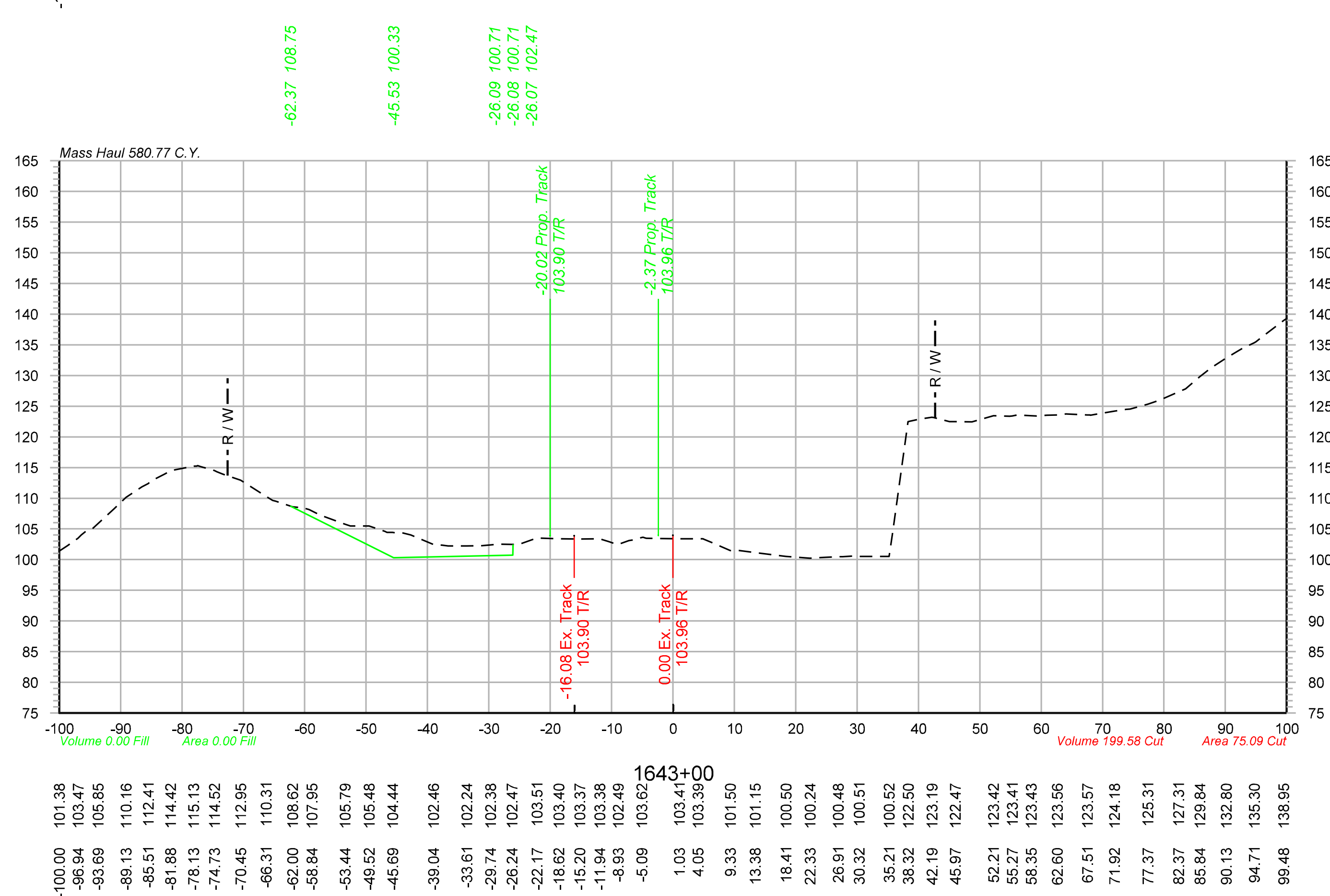
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

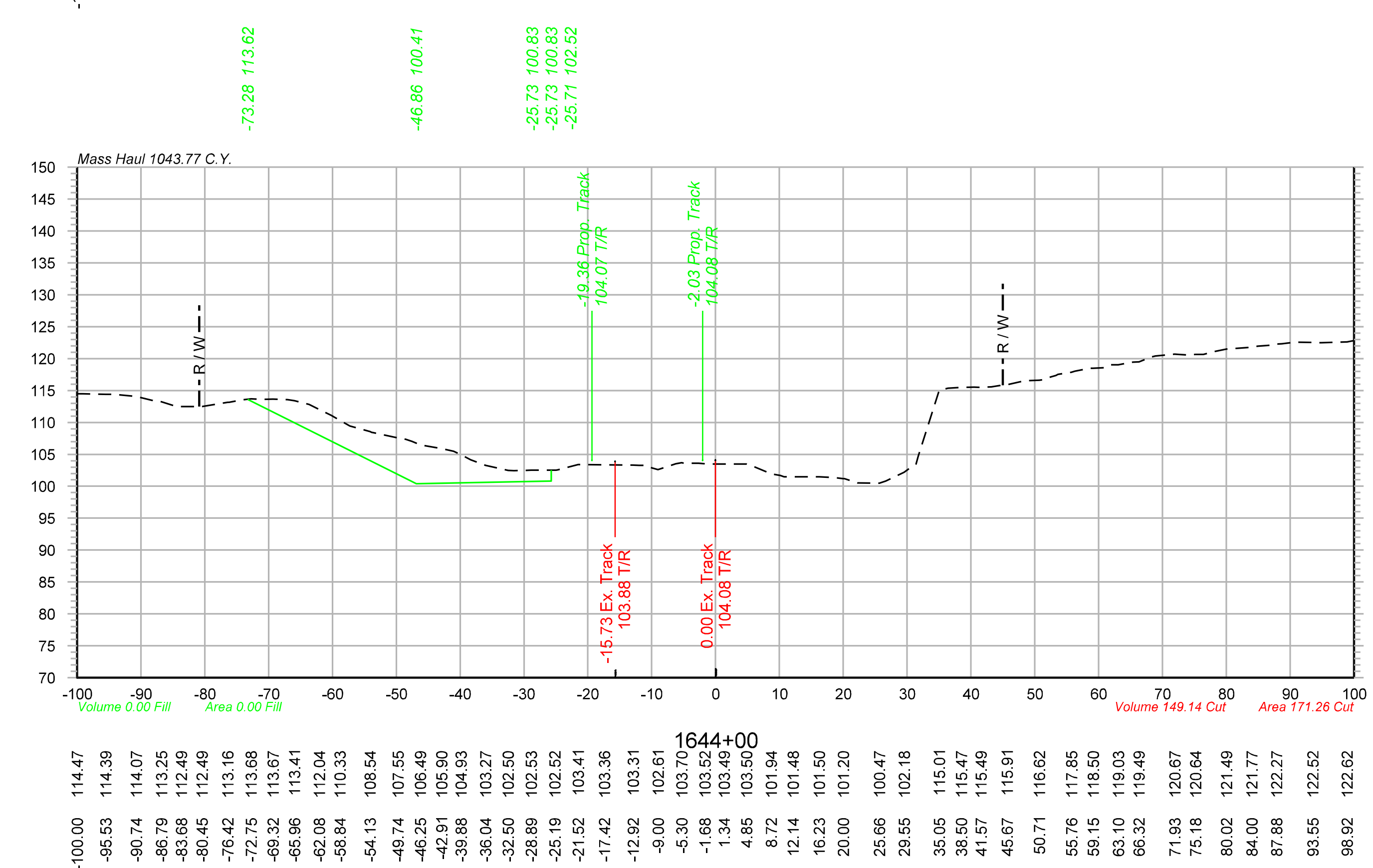
SHEET TITLE:
CROSS SECTIONS STA.1641+00 TO STA.1642+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

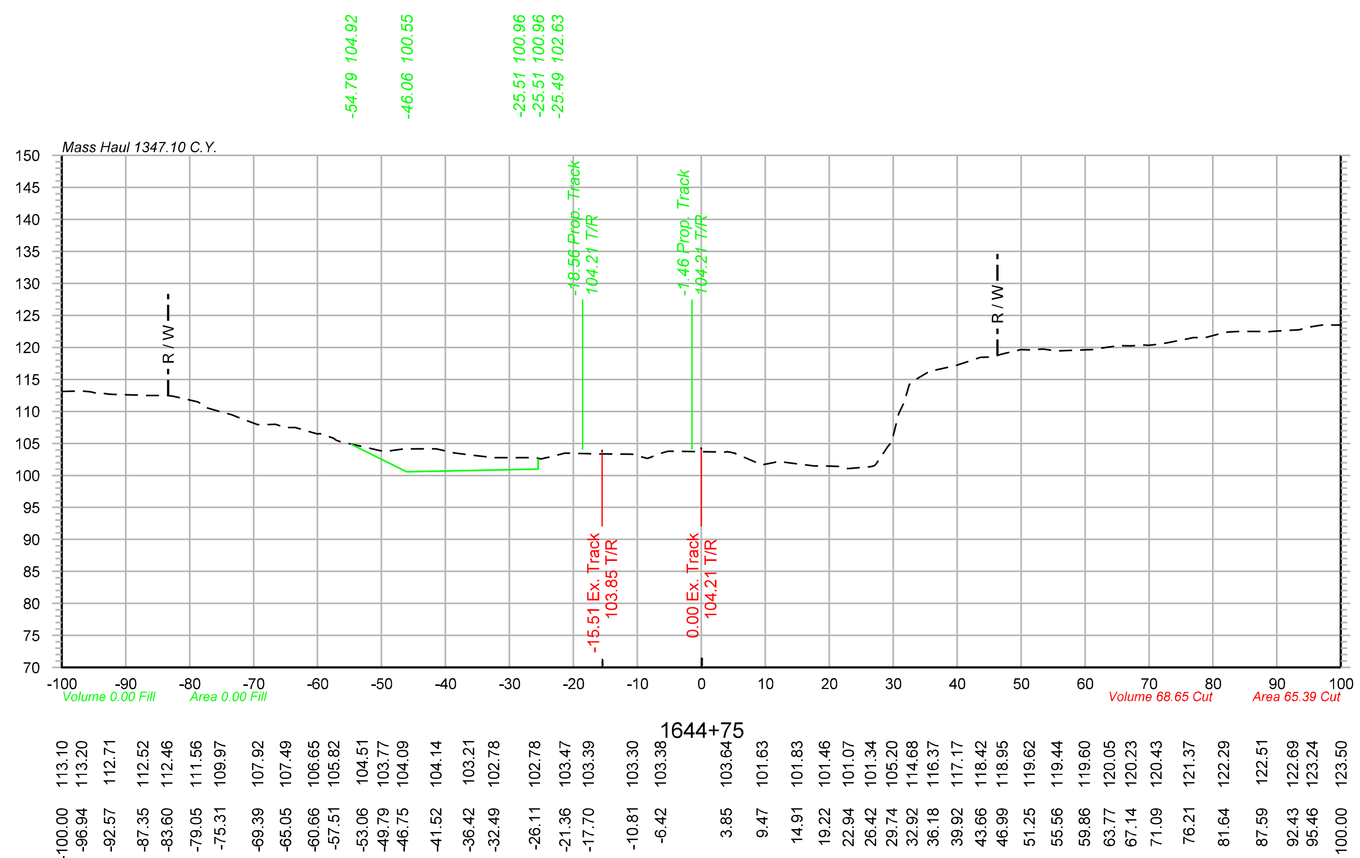
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 059 of 139

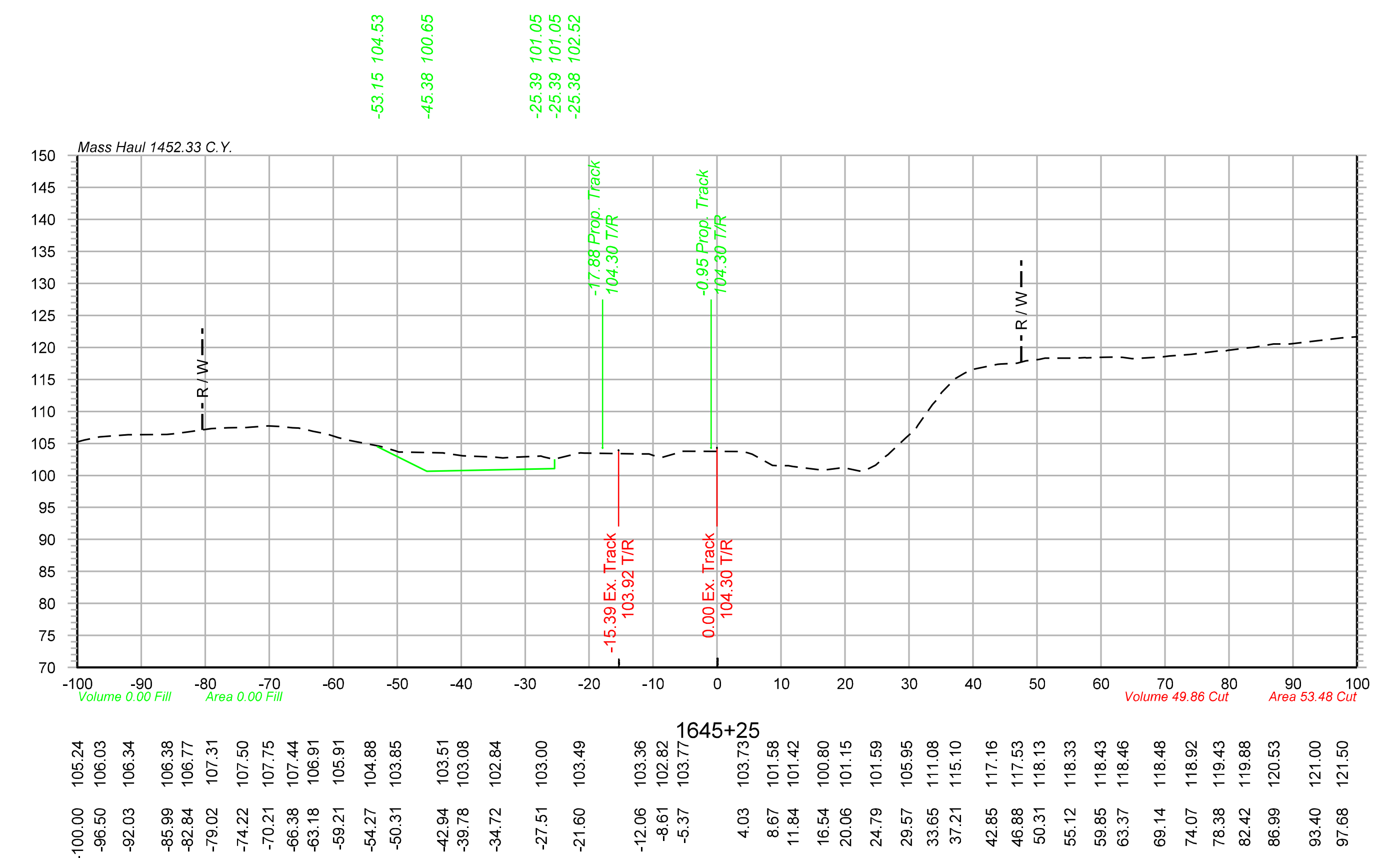
UNION PACIFIC RAILROAD

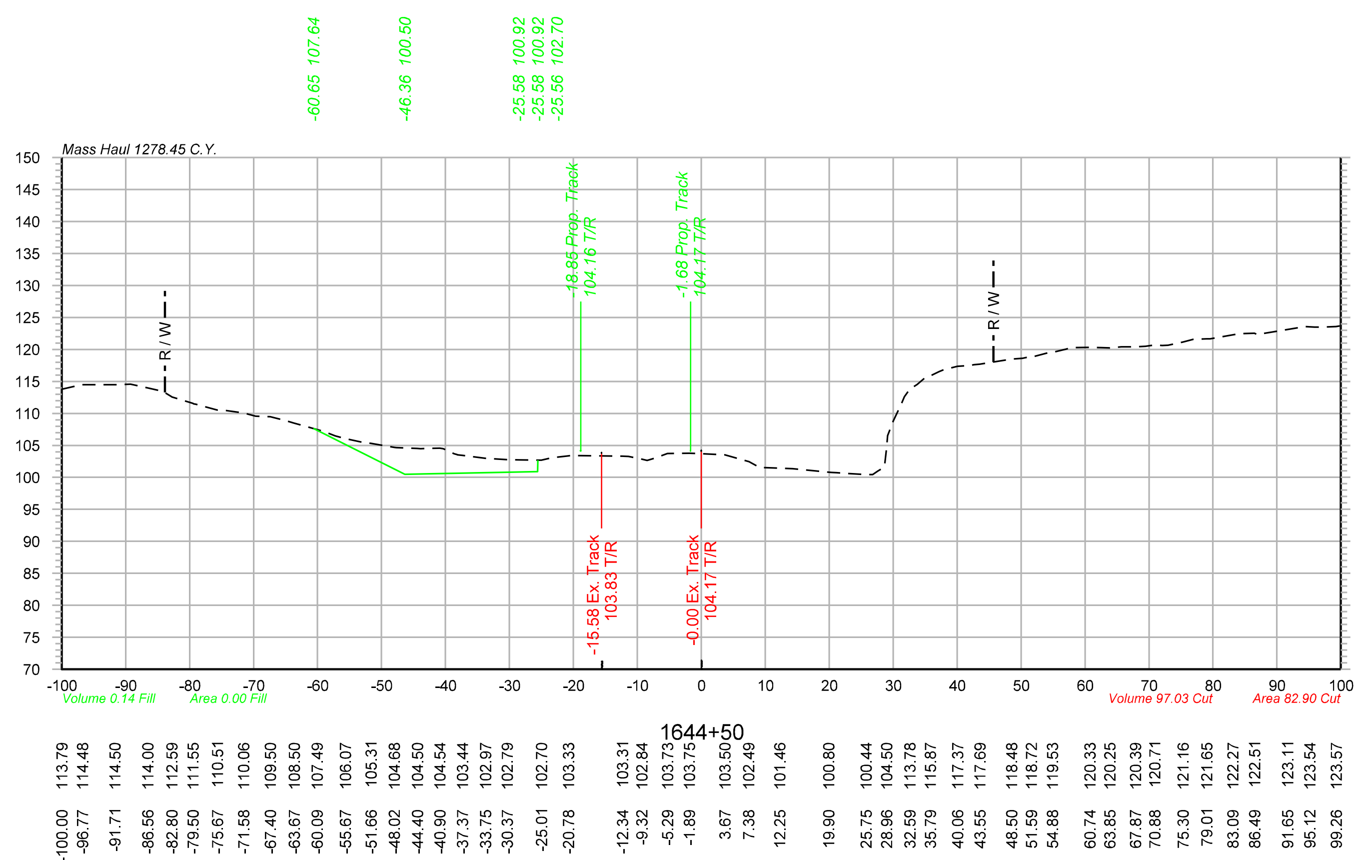
Office of Assistant Vice President
Engineering Design/Construction

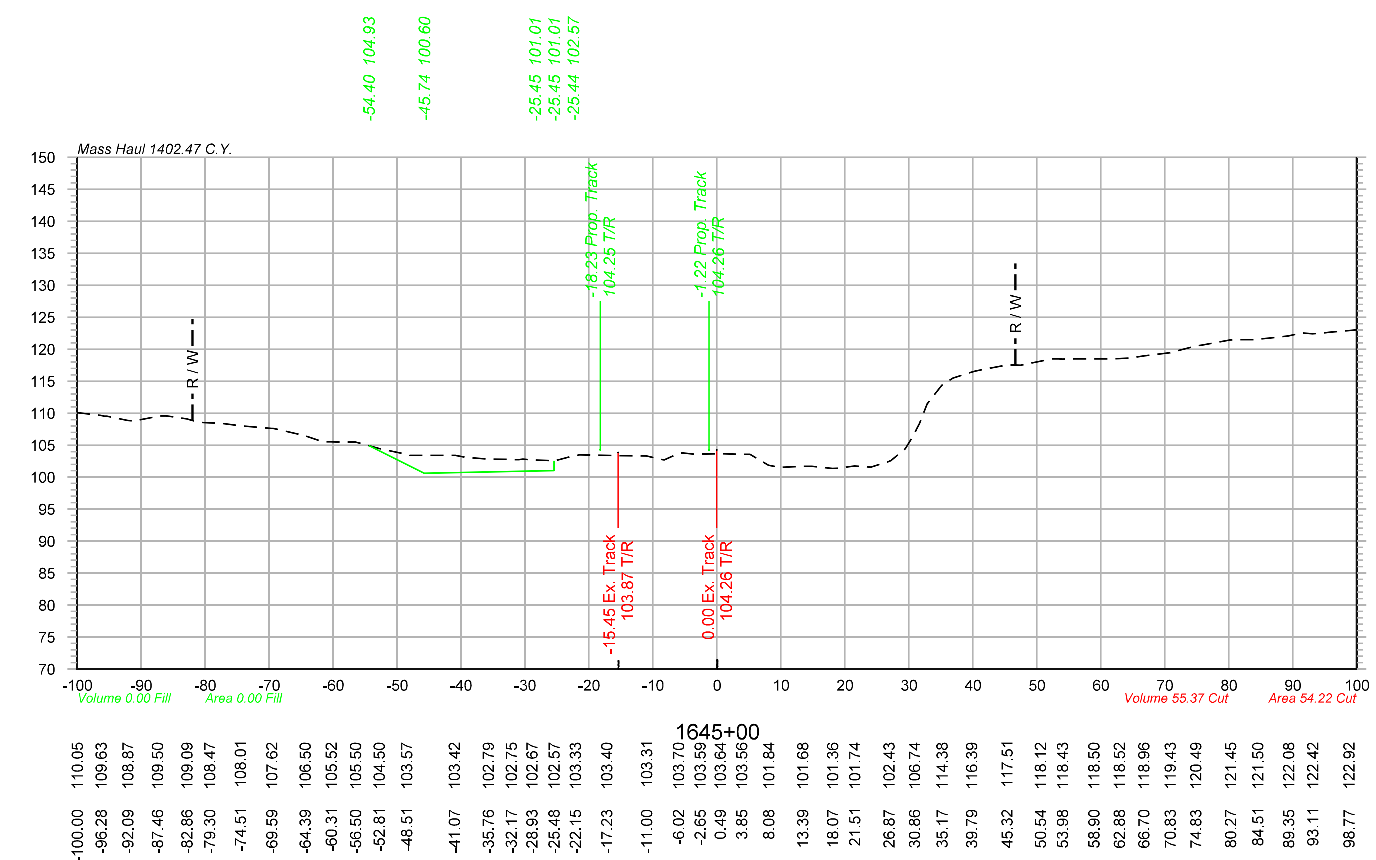
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1643+00 TO STA.1644+25









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

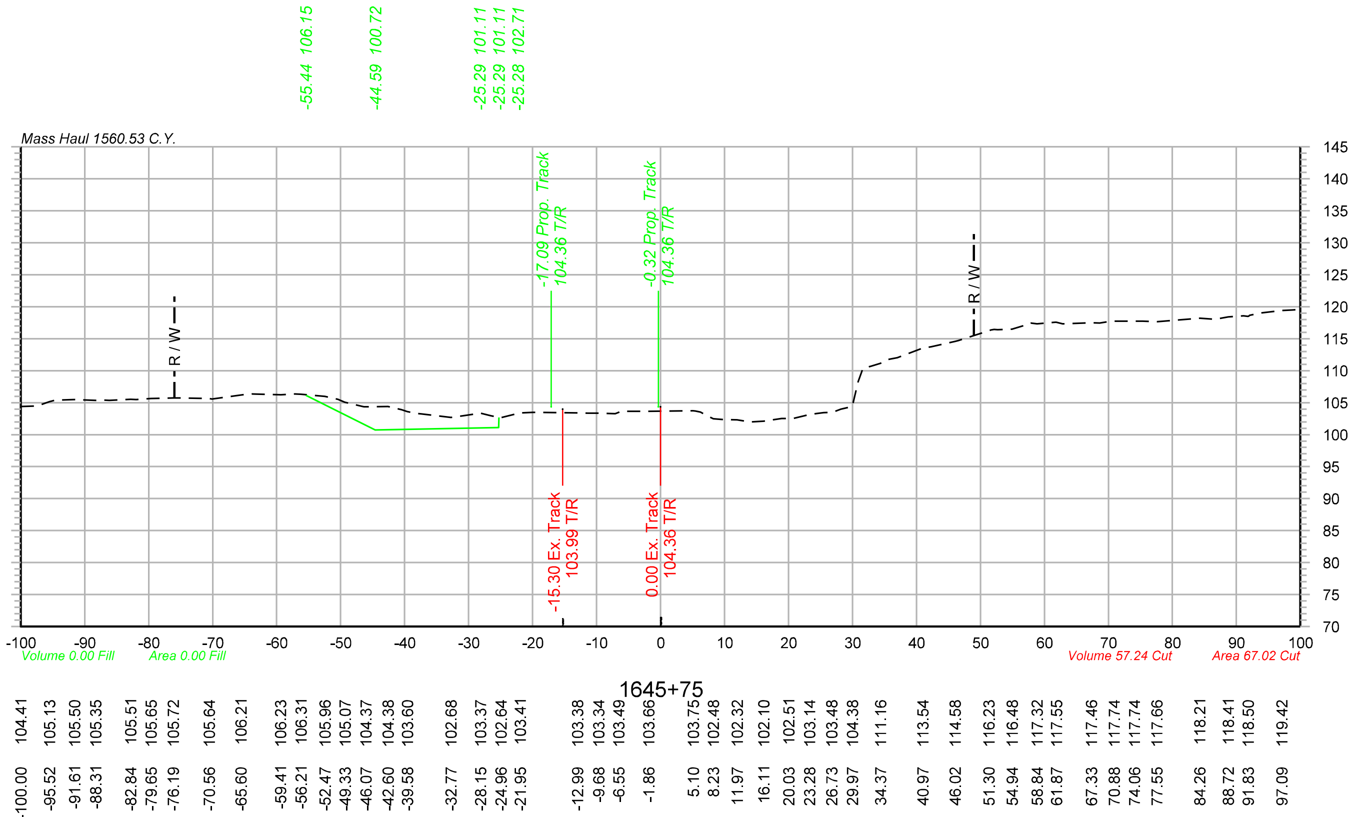
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 060 of 139

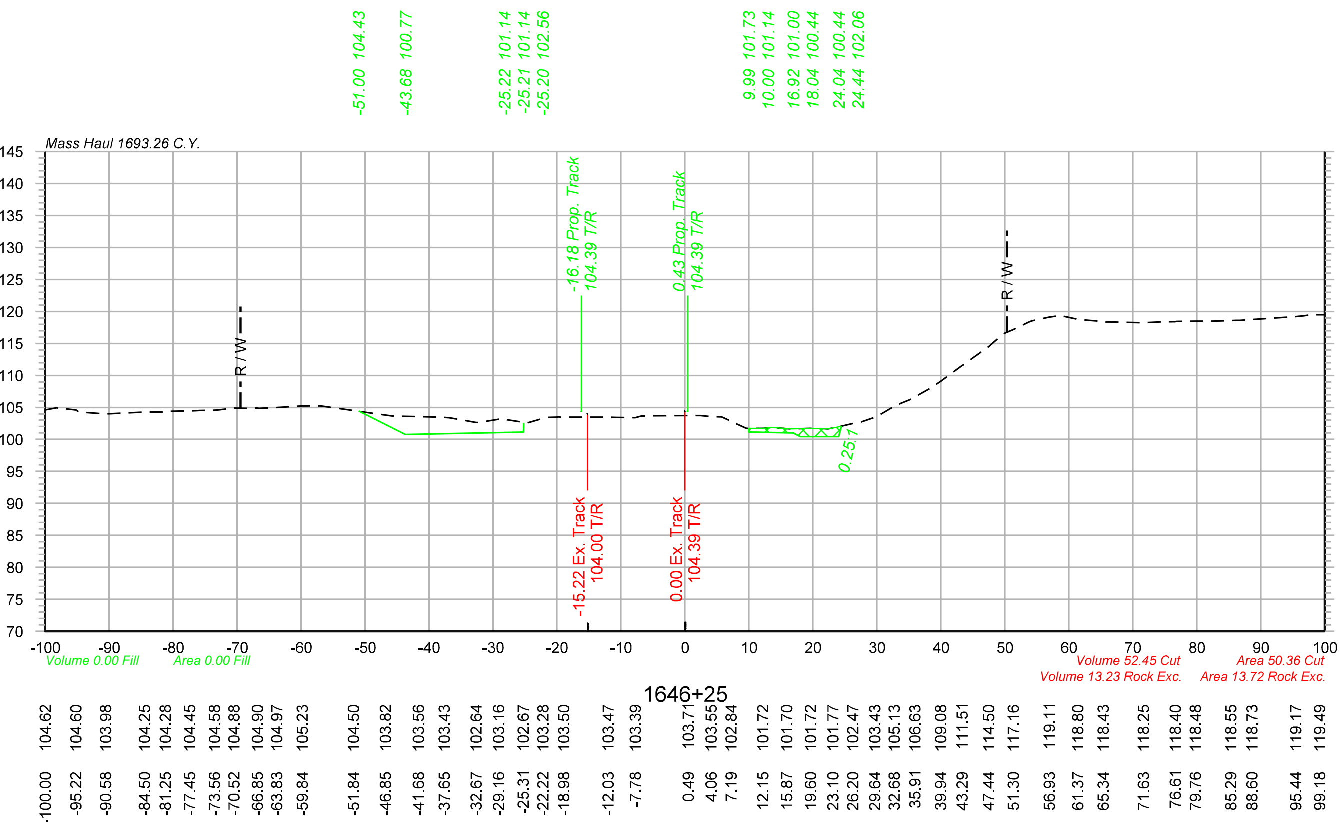
UNION PACIFIC RAILROAD

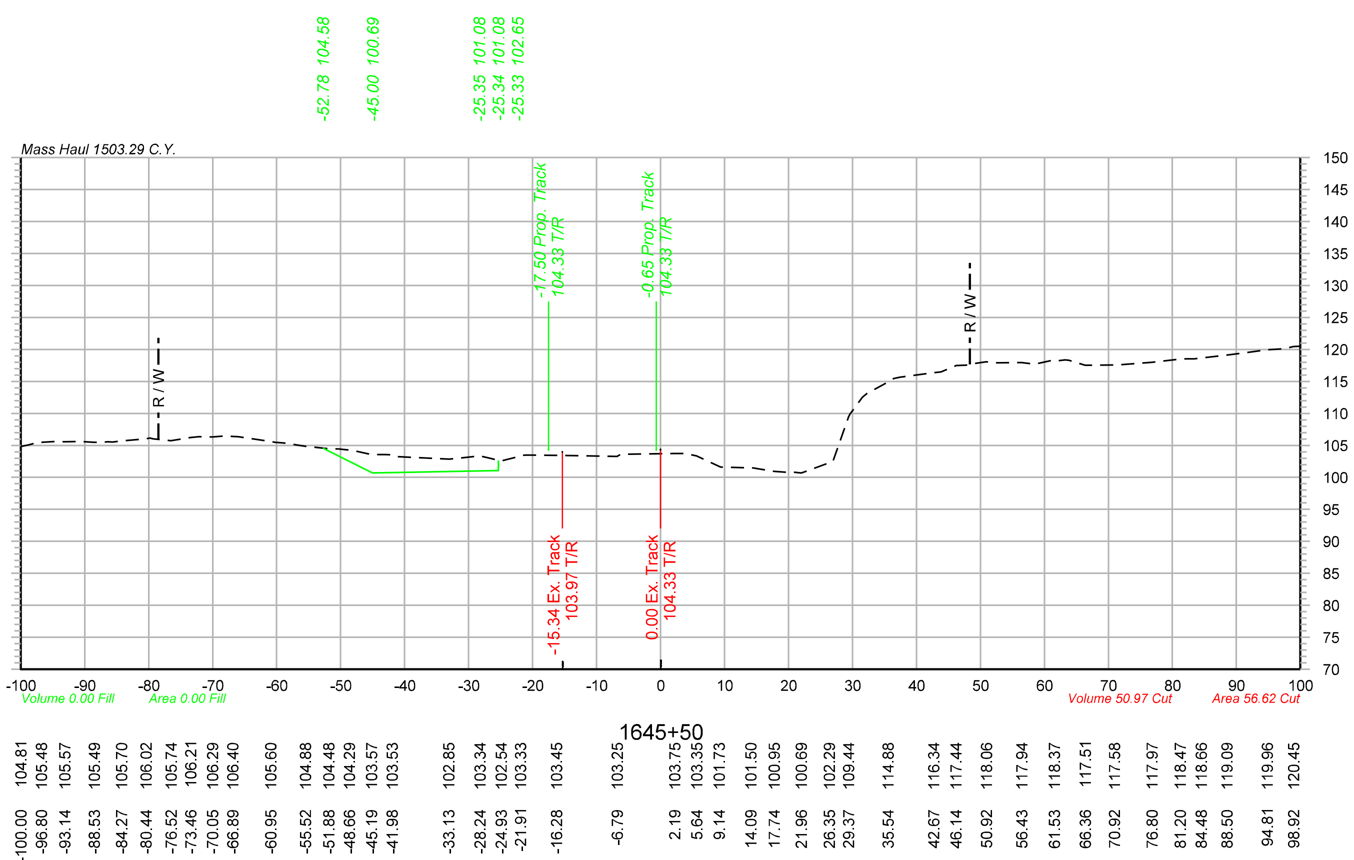
Office of Assistant Vice President
Engineering Design/Construction

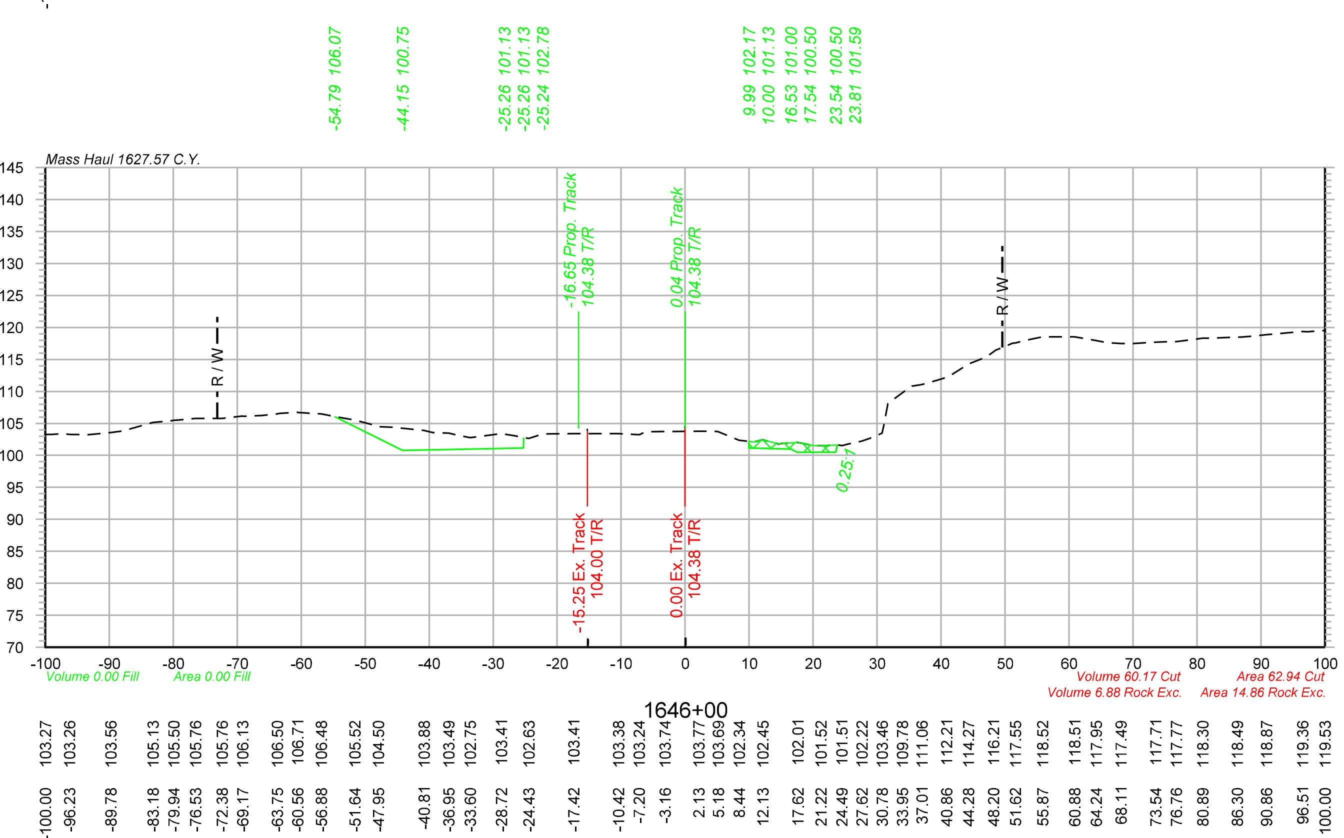
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1644+50 TO STA.1645+25









Legend

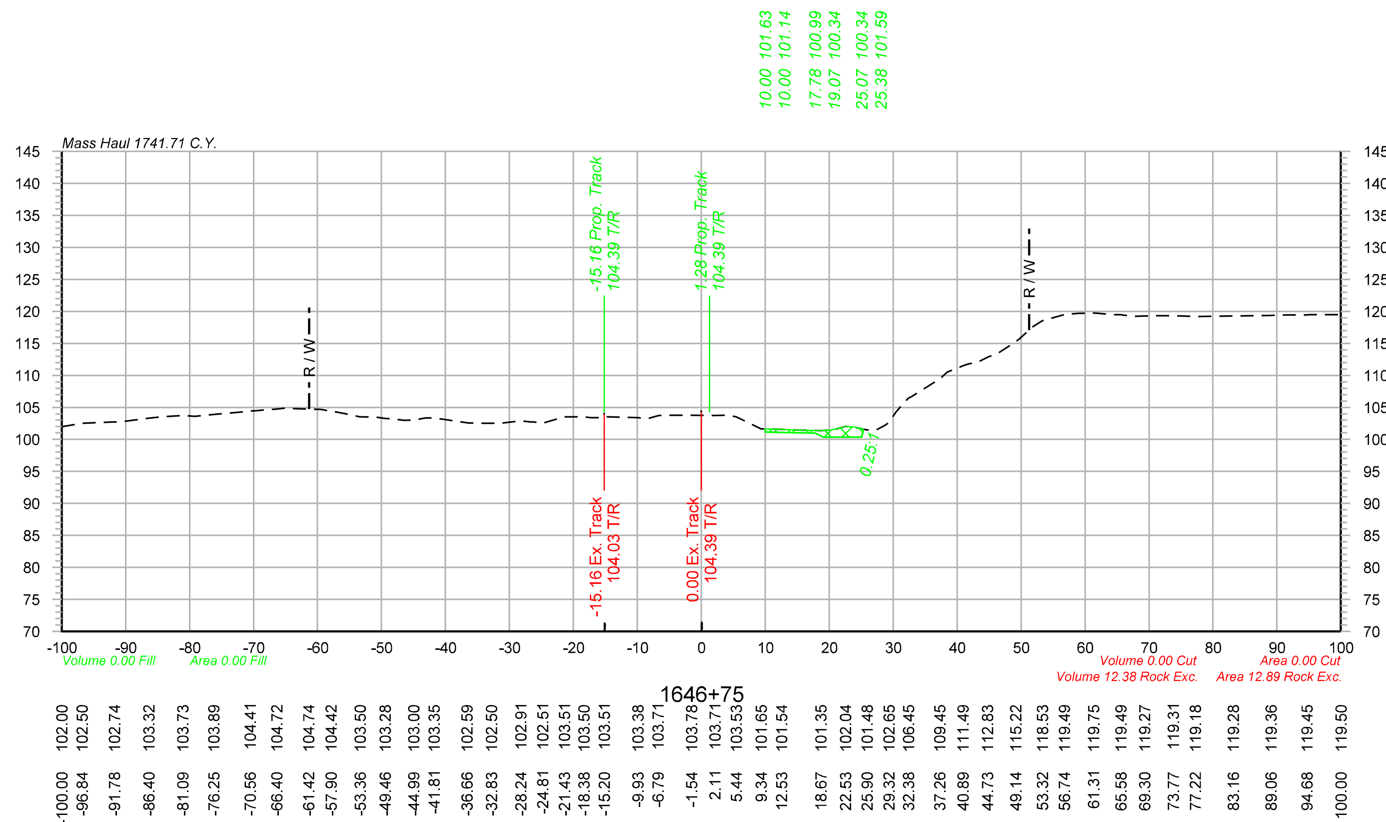
Assumed Rock Excavation

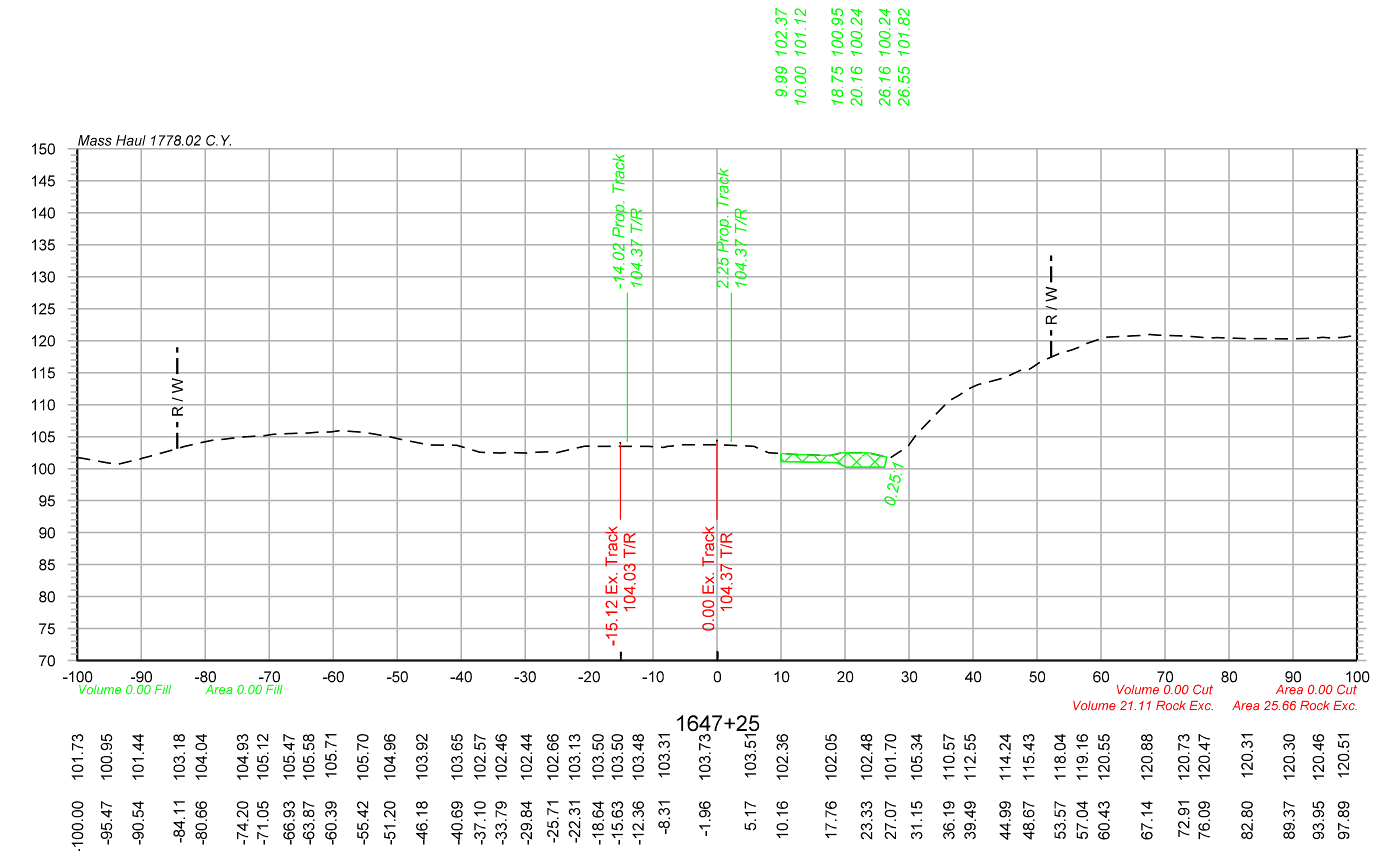
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

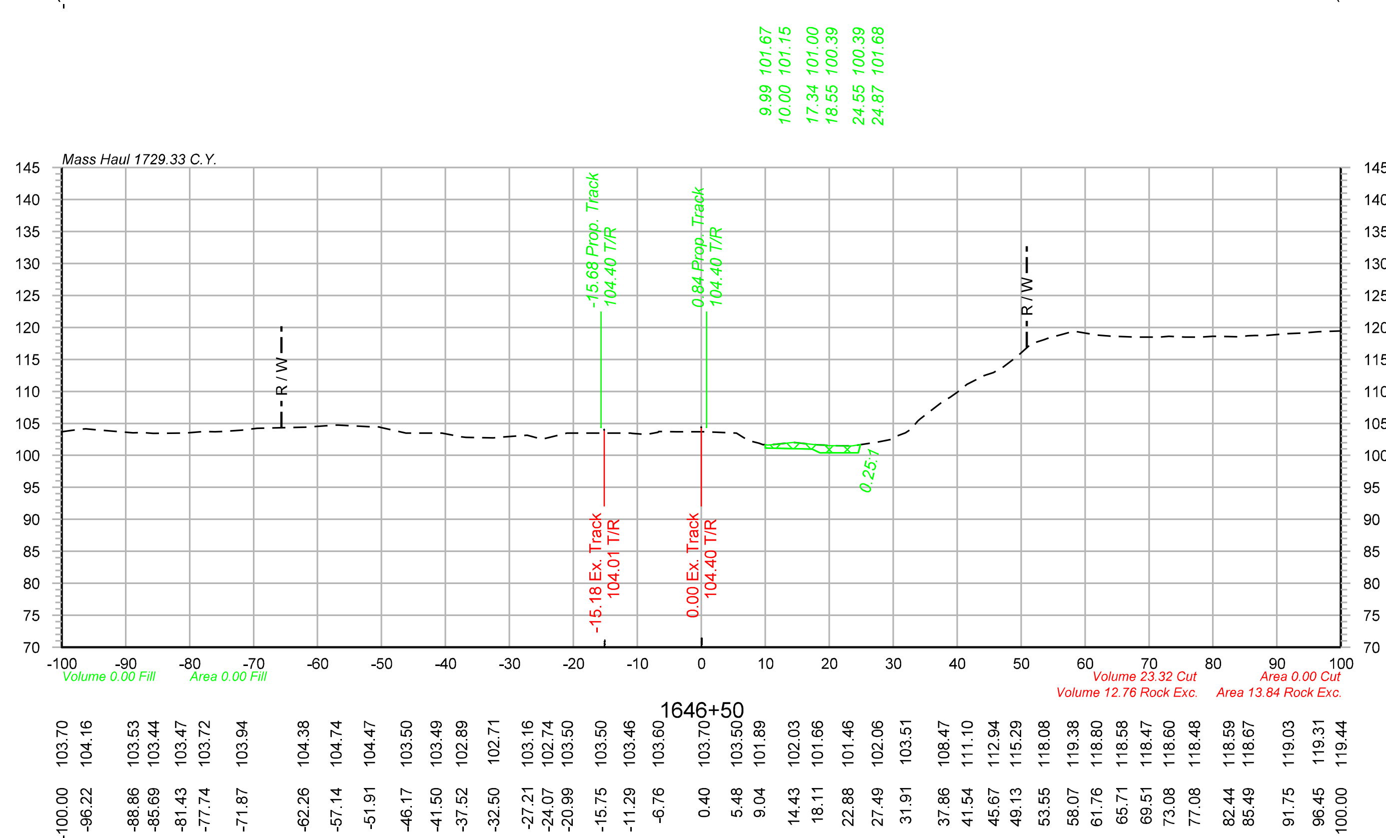
UNION PACIFIC

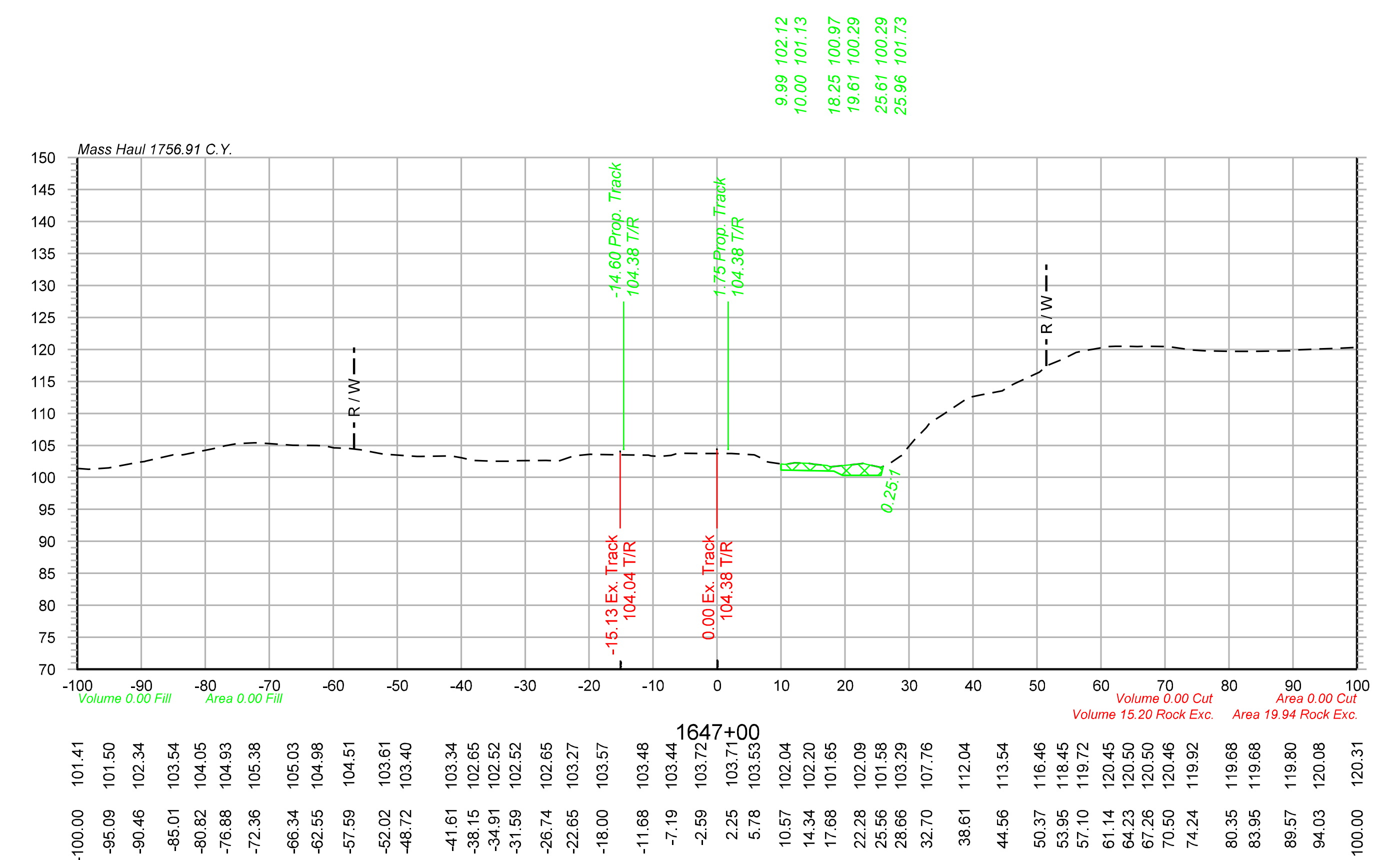
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 061 of 139	SHEET TITLE: CROSS SECTIONS STA.1645+50 TO STA.1646+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Legend

Assumed Rock Excavation

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 062 of 139

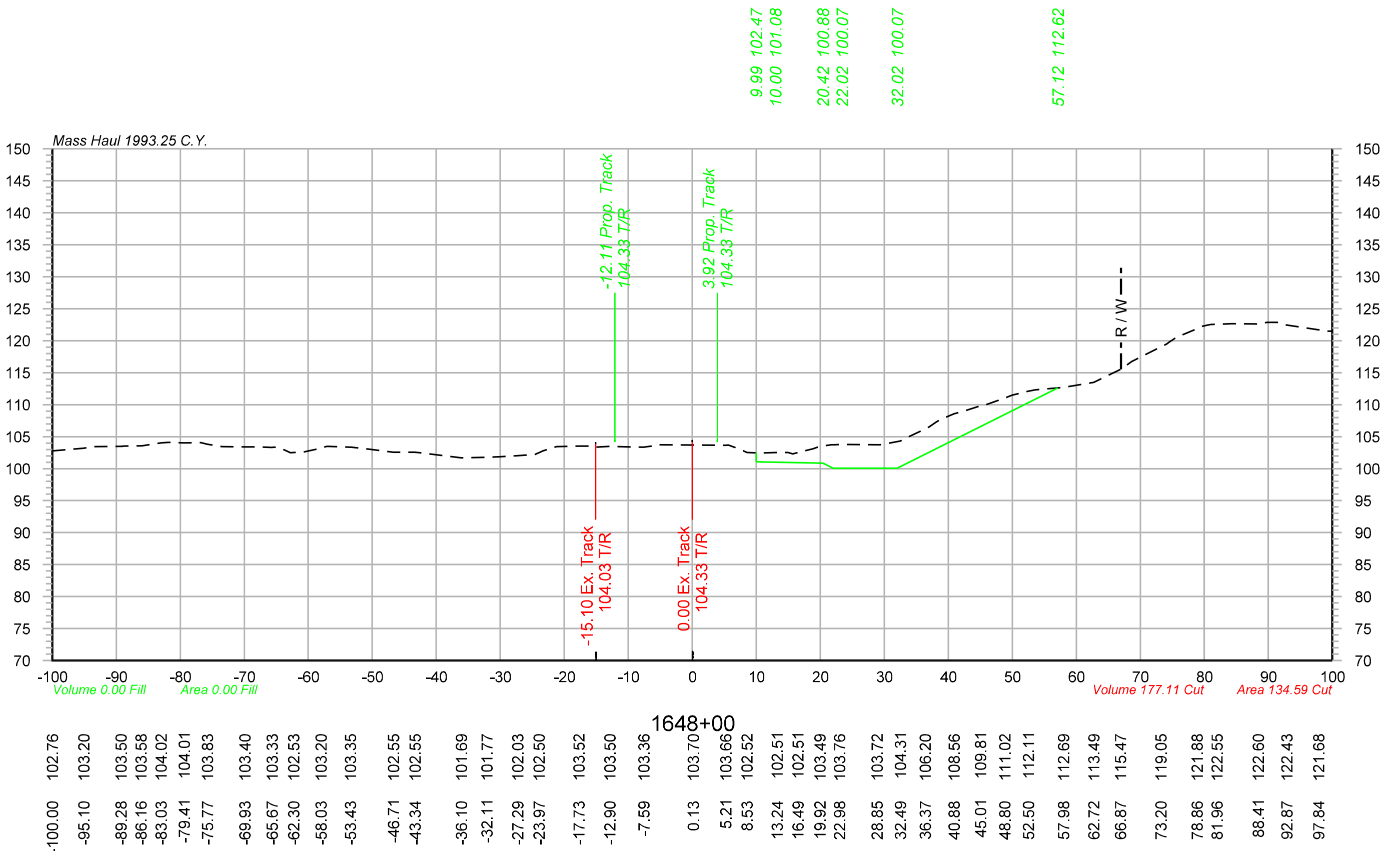
UNION PACIFIC RAILROAD

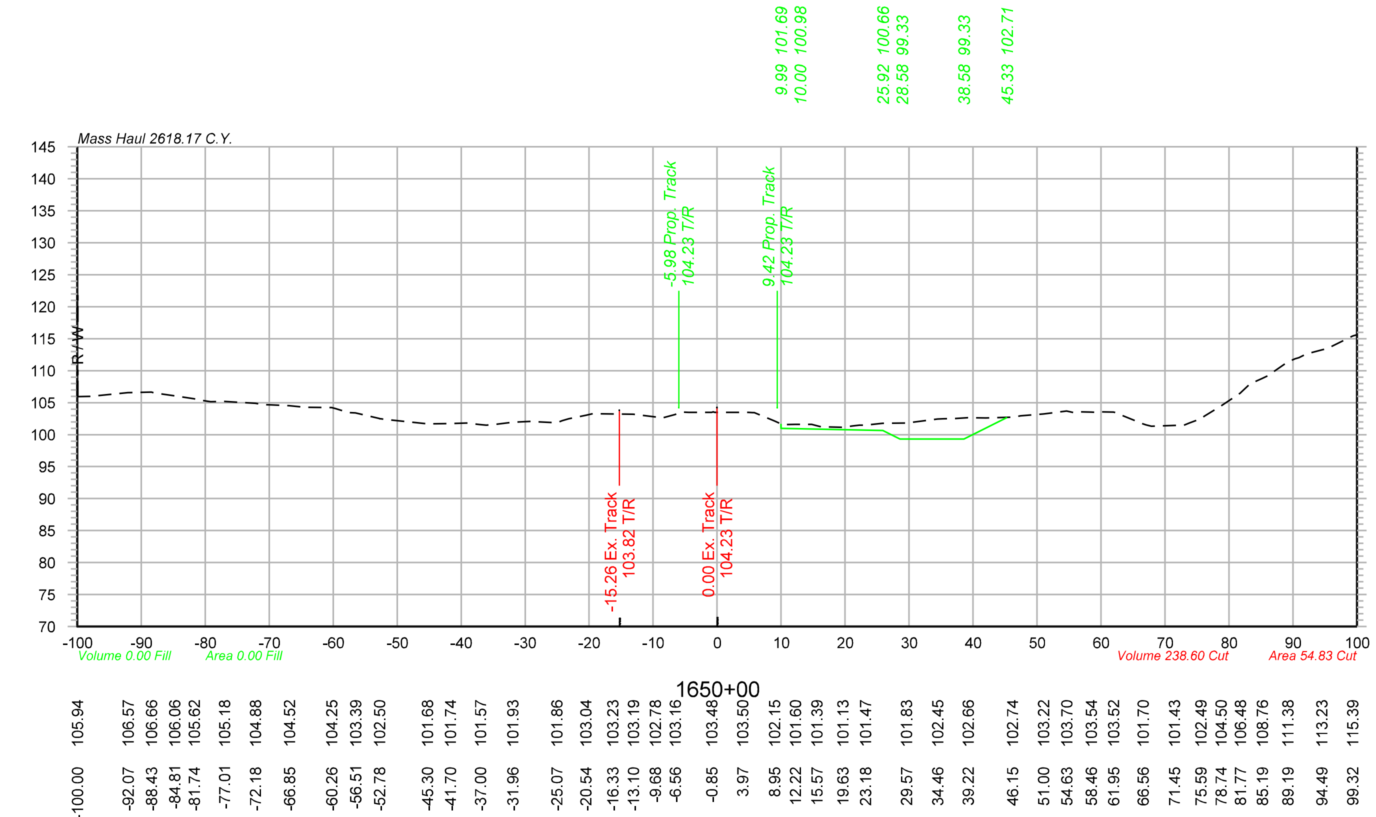
Office of Assistant Vice President Engineering Design/Construction

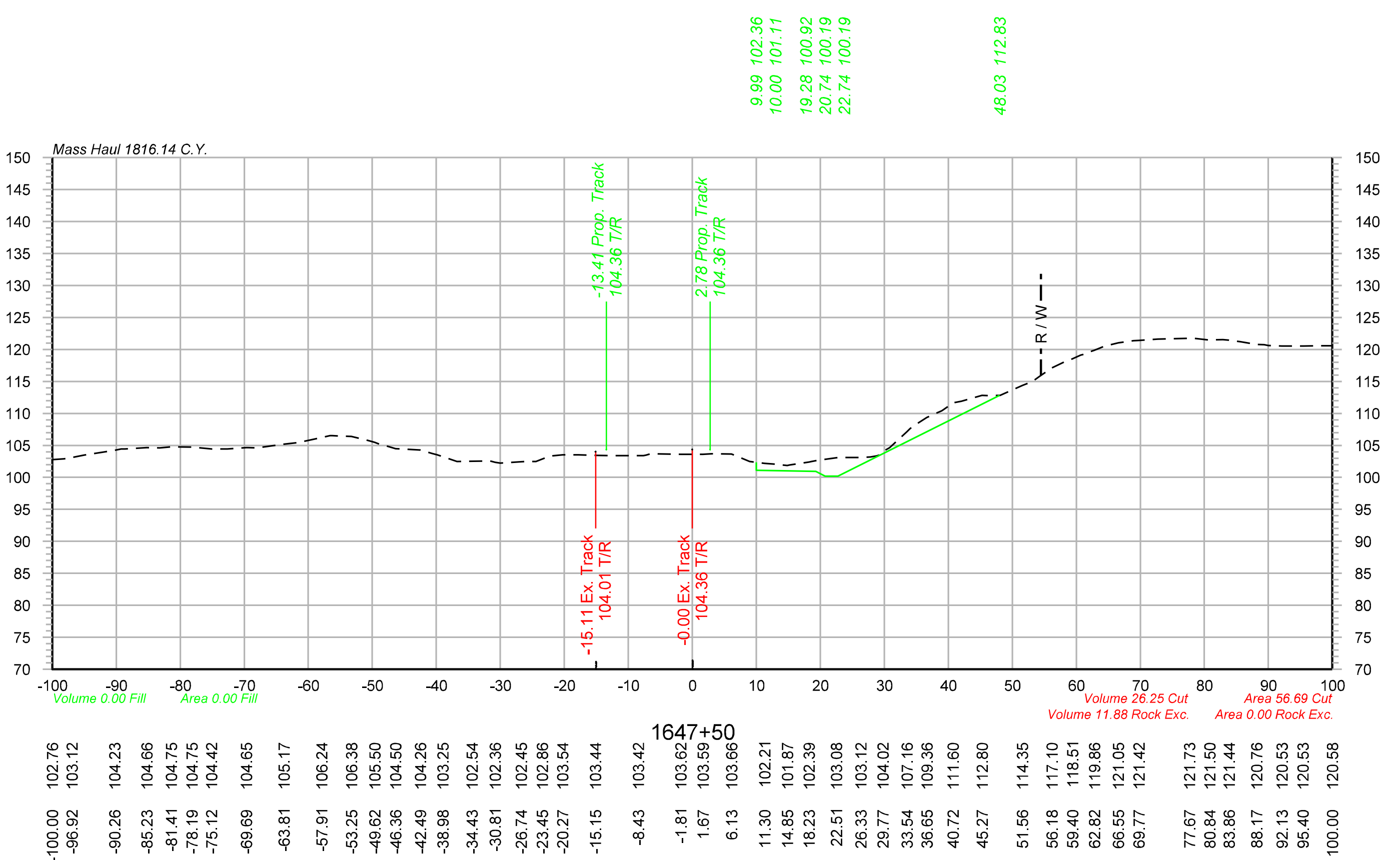
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

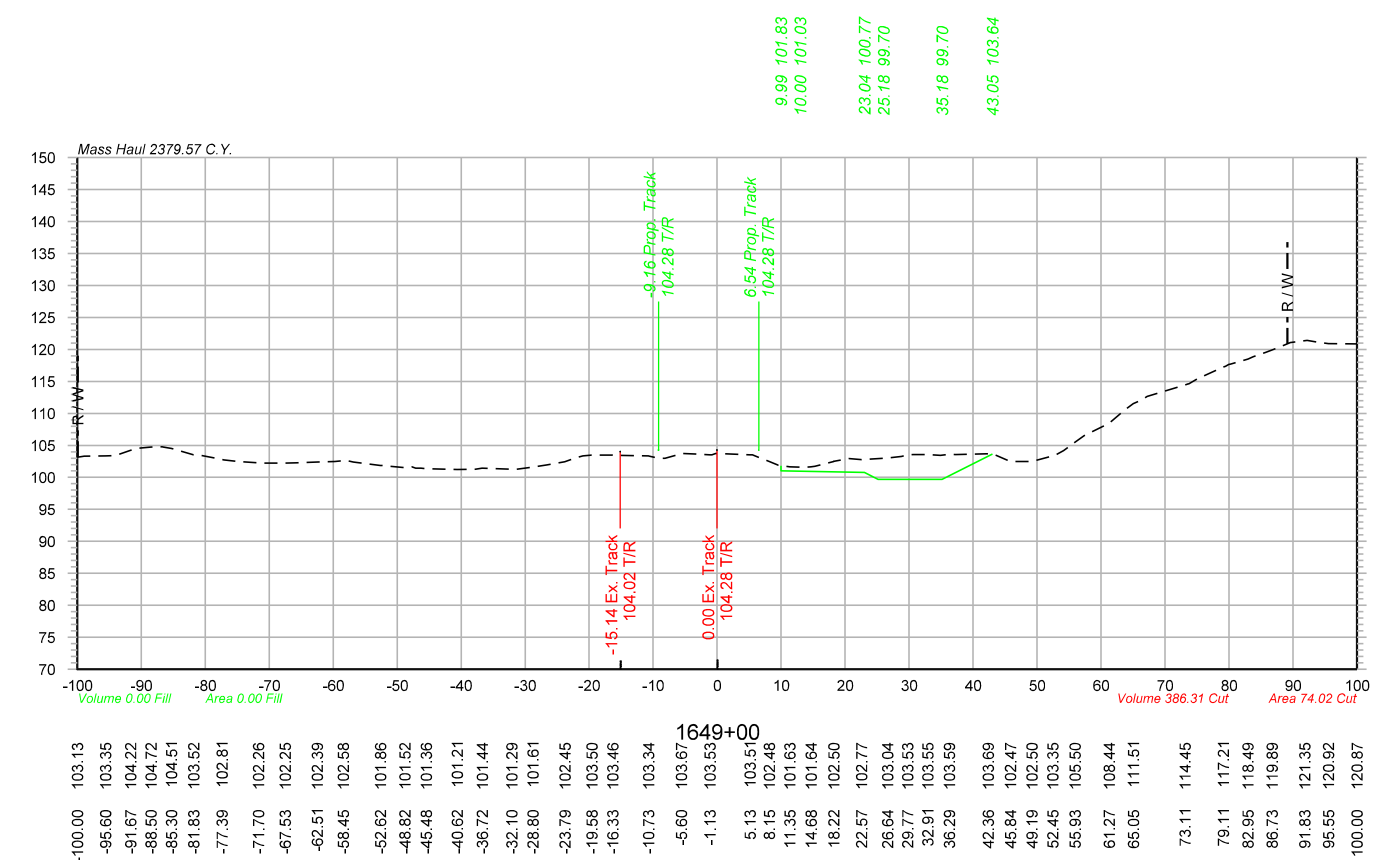
SHEET TITLE:
CROSS SECTIONS STA.1646+50 TO STA.1647+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

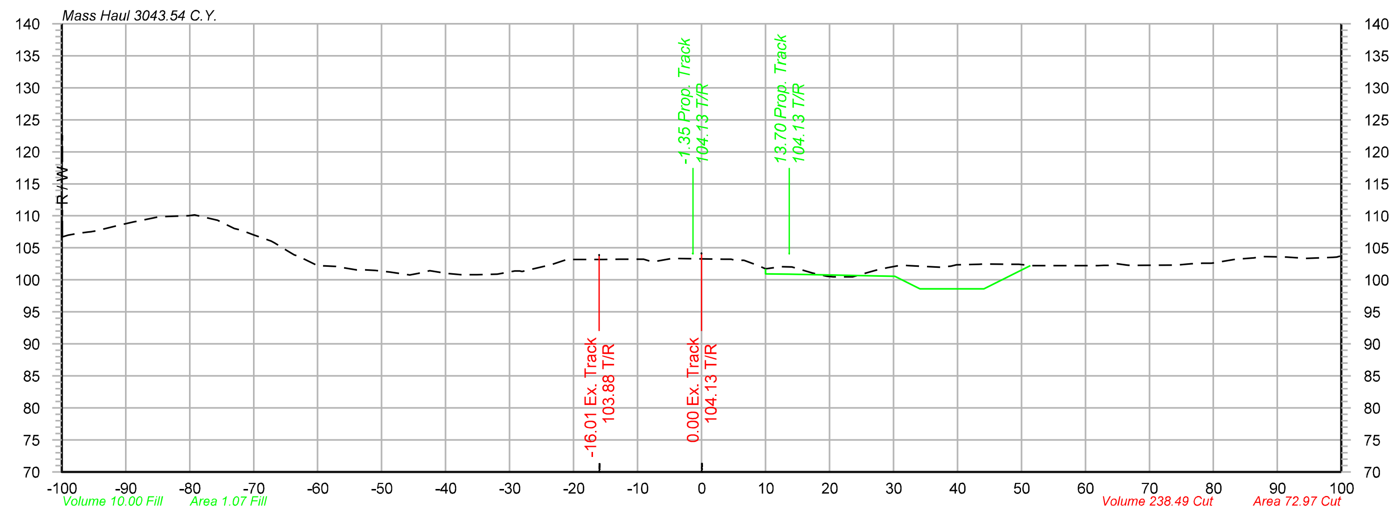
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 063 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1647+50 TO STA.1650+00

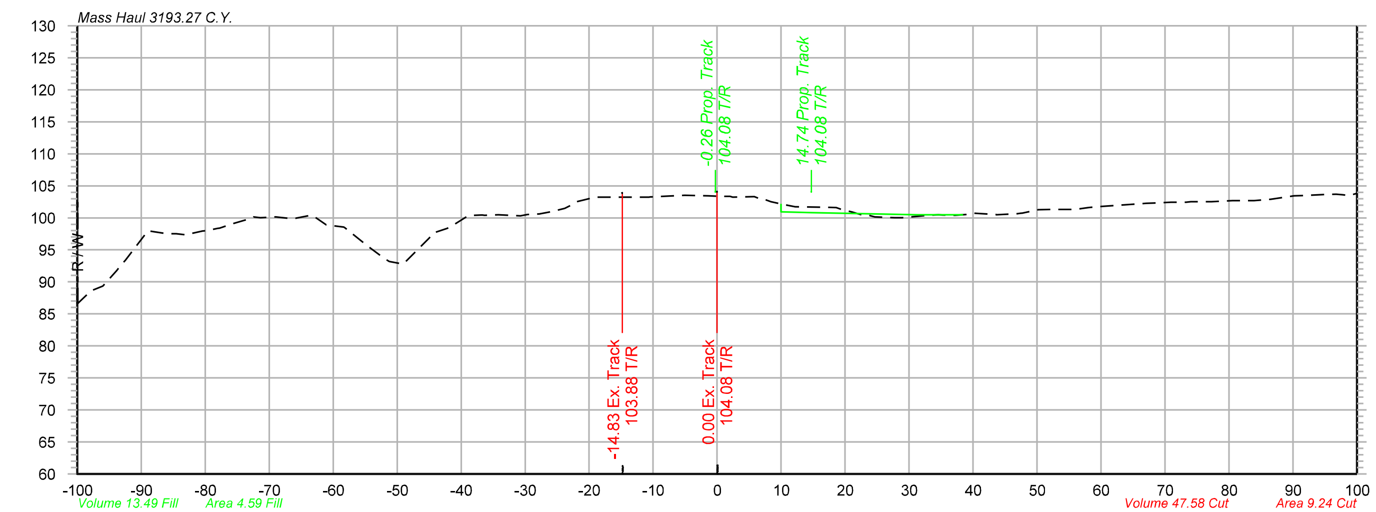
1652+00



Offset	Elevation
9.99	101.74
10.00	100.95
13.70	100.88
30.20	100.55
34.12	98.59
44.12	98.59
51.41	102.23

Offset	Elevation
-100.00	106.70
-96.14	107.42
-91.29	108.46
-87.52	109.28
-81.24	109.97
-77.99	109.84
-74.99	108.97
-71.98	107.76
-67.29	106.05
-63.66	103.91
-59.93	102.17
-53.92	101.58
-48.72	101.21
-45.59	100.78
-42.47	101.45
-37.61	100.80
-31.91	100.91
-28.41	101.39
-23.58	102.35
-16.74	103.20
-12.82	103.22
-9.03	103.23
-4.58	103.35
3.40	103.22
6.64	103.07
10.02	101.73
14.13	102.02
17.36	101.07
20.57	100.49
23.62	100.48
27.31	101.52
30.60	102.16
37.30	101.97
43.39	102.44
48.49	102.44
51.58	102.22
61.94	102.24
66.47	102.30
74.23	102.33
78.30	102.59
84.00	103.29
87.56	103.66
91.43	103.54
98.67	103.52

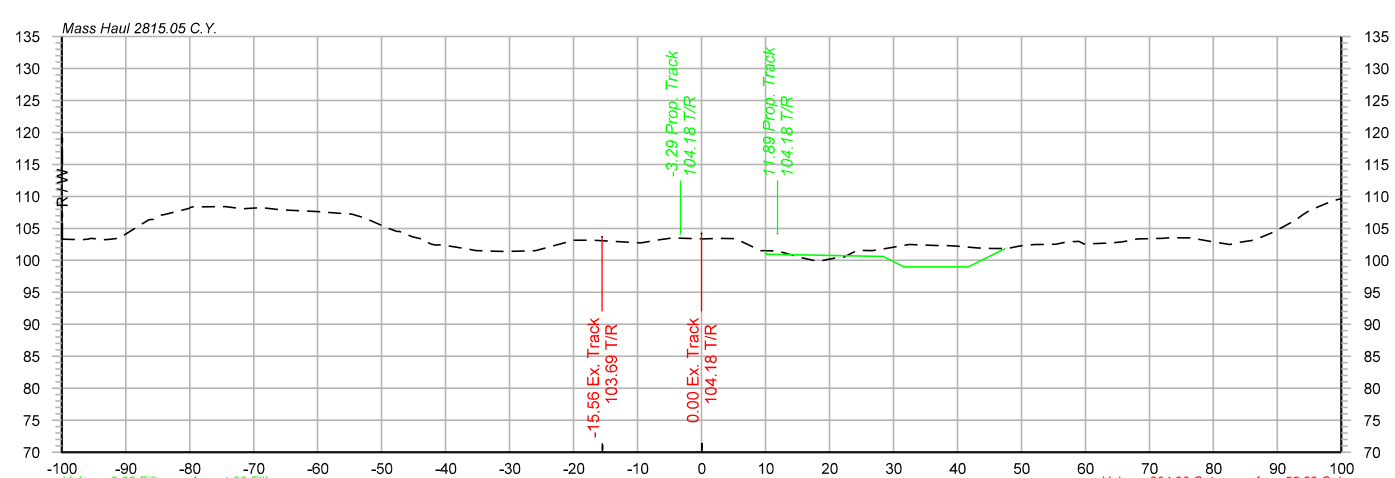
1653+00



Offset	Elevation
9.99	102.18
10.00	100.92
14.74	100.83
31.24	100.50
31.24	100.50
38.45	100.50

Offset	Elevation
-100.00	86.56
-96.02	89.33
-92.51	93.34
-88.98	97.96
-85.62	97.50
-80.46	97.93
-75.77	99.06
-72.48	100.13
-69.00	100.15
-65.86	99.95
-61.07	98.89
-54.59	95.57
-51.23	93.20
-44.99	96.86
-41.55	98.70
-37.97	100.38
-34.20	100.47
-30.75	100.32
-25.80	100.98
-22.75	102.02
-19.08	103.24
-11.66	103.24
-5.04	103.54
-1.38	103.42
1.73	103.35
5.81	103.32
10.30	102.12
17.12	101.66
21.17	100.90
24.66	100.15
27.74	100.01
33.00	100.41
37.20	100.39
43.60	100.50
46.93	100.63
50.22	101.26
55.95	101.33
59.32	101.74
66.53	102.24
70.97	102.44
74.06	102.52
77.27	102.52
80.55	102.71
83.93	102.69
90.20	103.43
95.01	103.63
98.76	103.49

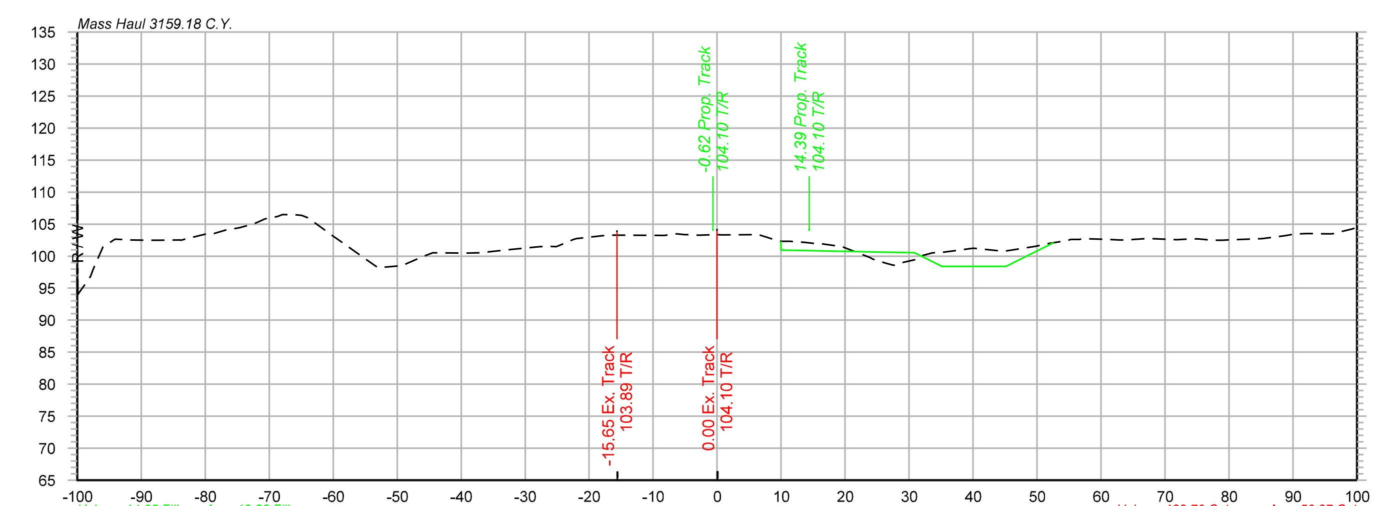
1651+00



Offset	Elevation
9.99	101.51
10.00	100.97
11.89	100.93
28.39	100.60
31.67	98.96
41.67	98.96
47.47	101.86

Offset	Elevation
-100.00	103.32
-96.85	103.21
-93.11	103.22
-86.46	106.29
-80.17	108.13
-74.60	108.41
-69.63	108.20
-65.76	107.88
-59.67	107.60
-56.00	107.31
-52.71	106.66
-48.96	105.04
-45.40	103.79
-42.23	102.53
-37.04	101.87
-33.53	101.50
-28.59	101.42
-24.38	101.95
-21.19	102.82
-16.99	103.14
-9.45	102.73
-5.26	103.41
0.26	103.36
5.29	103.40
9.22	101.52
13.35	101.06
18.19	99.86
21.71	100.52
26.68	101.54
32.43	102.46
36.96	102.32
43.19	101.92
47.83	101.86
52.23	102.50
55.39	102.53
58.54	102.93
63.25	102.69
68.20	103.38
72.02	103.45
75.68	103.51
79.45	103.00
82.51	102.48
85.97	103.11
89.34	104.38
92.93	106.37
97.66	108.91

1652+57



Offset	Elevation
9.99	102.31
10.00	100.94
14.39	100.85
30.89	100.52
35.17	98.38
45.17	98.38
52.64	102.12

Offset	Elevation
-100.00	93.89
-95.98	101.40
-91.69	102.51
-87.36	102.50
-83.97	102.52
-79.80	103.47
-74.61	104.46
-70.66	105.80
-67.34	106.49
-63.94	105.97
-60.73	103.66
-55.90	100.23
-49.22	98.54
-46.06	99.88
-40.02	100.50
-36.70	100.56
-32.38	101.01
-27.69	101.49
-23.12	102.32
-17.15	103.26
-8.19	103.24
-5.08	103.36
-0.28	103.35
6.08	103.35
9.17	102.50
13.07	102.20
19.54	101.49
23.92	99.77
27.60	98.57
30.92	99.45
34.68	100.54
37.89	100.92
44.65	100.76
49.72	101.52
54.74	102.45
61.22	102.60
67.00	102.73
71.83	102.56
75.18	102.70
78.94	102.48
85.19	102.71
88.77	103.21
92.02	103.51
95.19	103.50
99.24	104.21

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

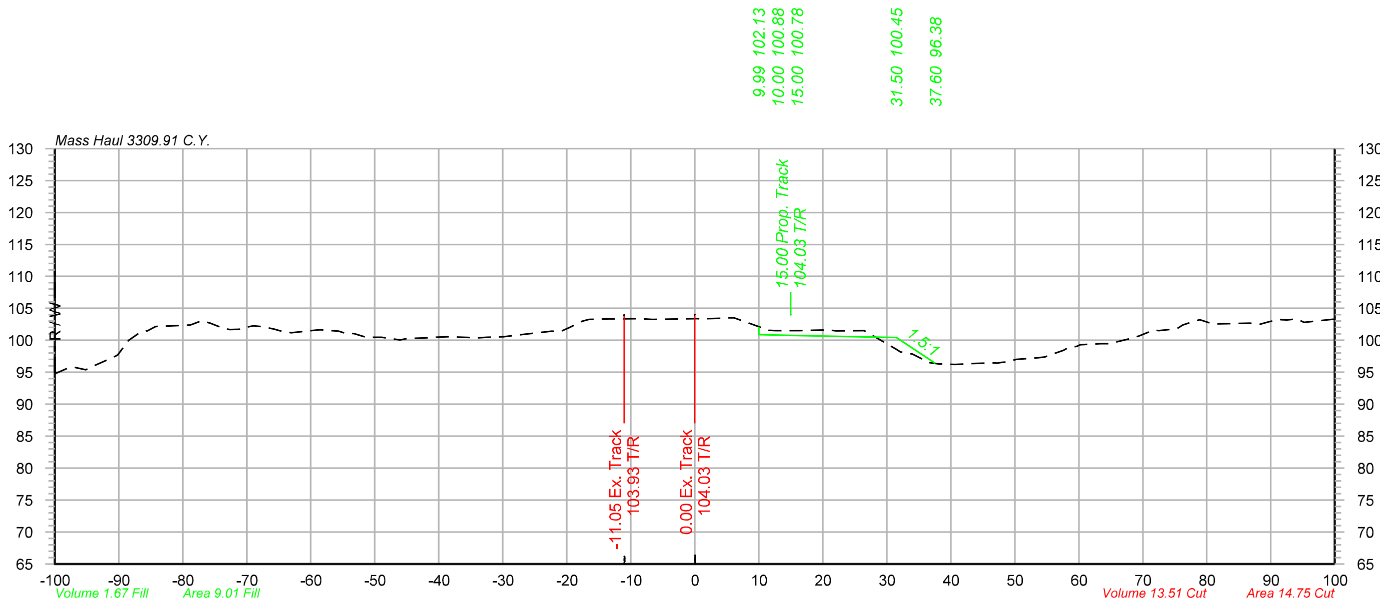
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 064 of 139

UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

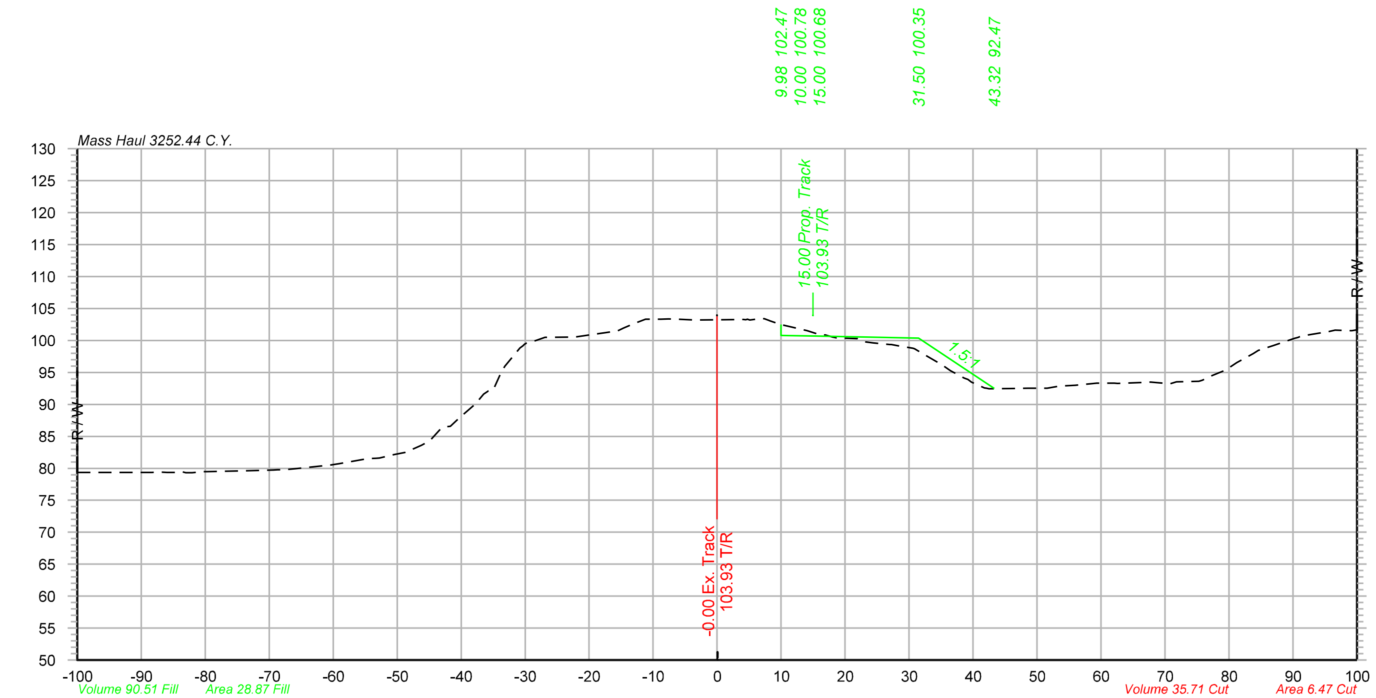
SHEET TITLE:
CROSS SECTIONS STA.1651+00 TO STA.1653+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\ipam\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



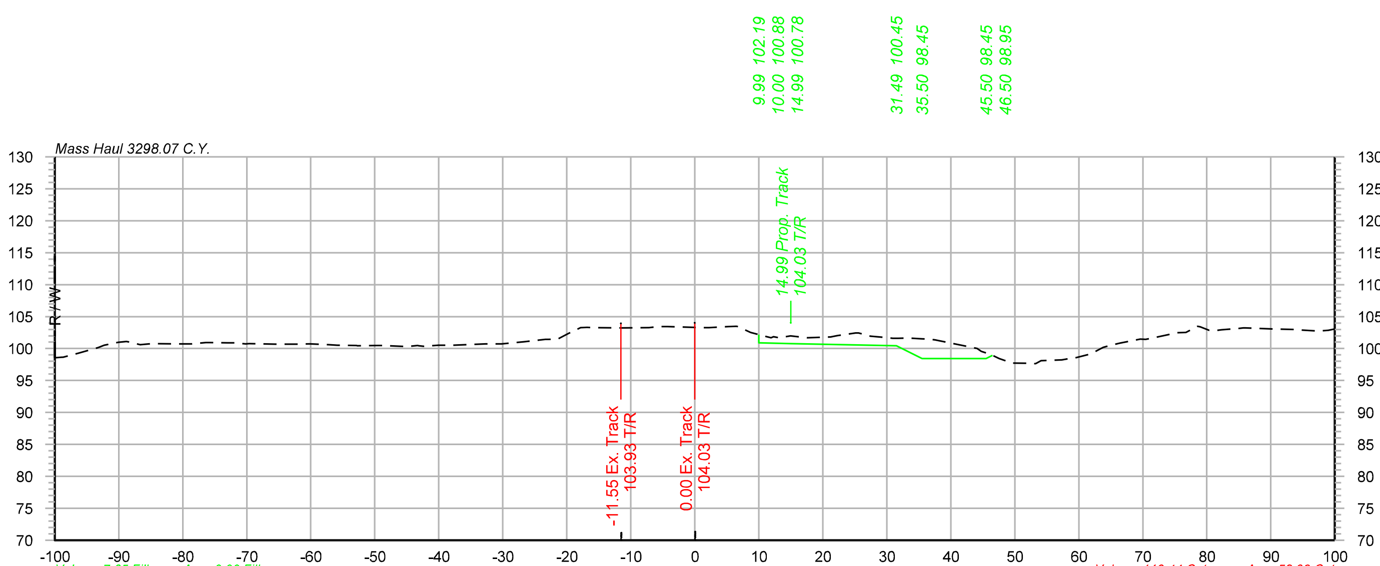
1654+00

-100.00	94.93
-96.85	95.77
-90.88	97.36
-87.00	101.00
-83.62	102.23
-78.86	102.38
-75.68	102.68
-72.64	101.68
-68.97	102.27
-65.75	101.75
-59.14	101.59
-55.63	101.44
-51.34	100.48
-46.07	100.07
-41.82	100.40
-38.52	100.56
-35.03	100.42
-29.87	100.55
-23.42	101.31
-19.54	102.03
-13.48	103.34
-8.64	103.38
0.30	103.40
5.12	103.49
11.64	101.54
16.31	101.50
19.64	101.61
26.28	101.50
31.55	98.56
36.63	96.51
40.64	96.22
46.91	96.48
50.21	97.02
53.57	97.26
57.59	98.44
63.45	99.47
68.35	100.34
71.71	101.59
75.51	101.93
78.90	103.21
83.20	102.59
86.74	102.69
89.81	102.95
94.07	103.35
99.43	103.28



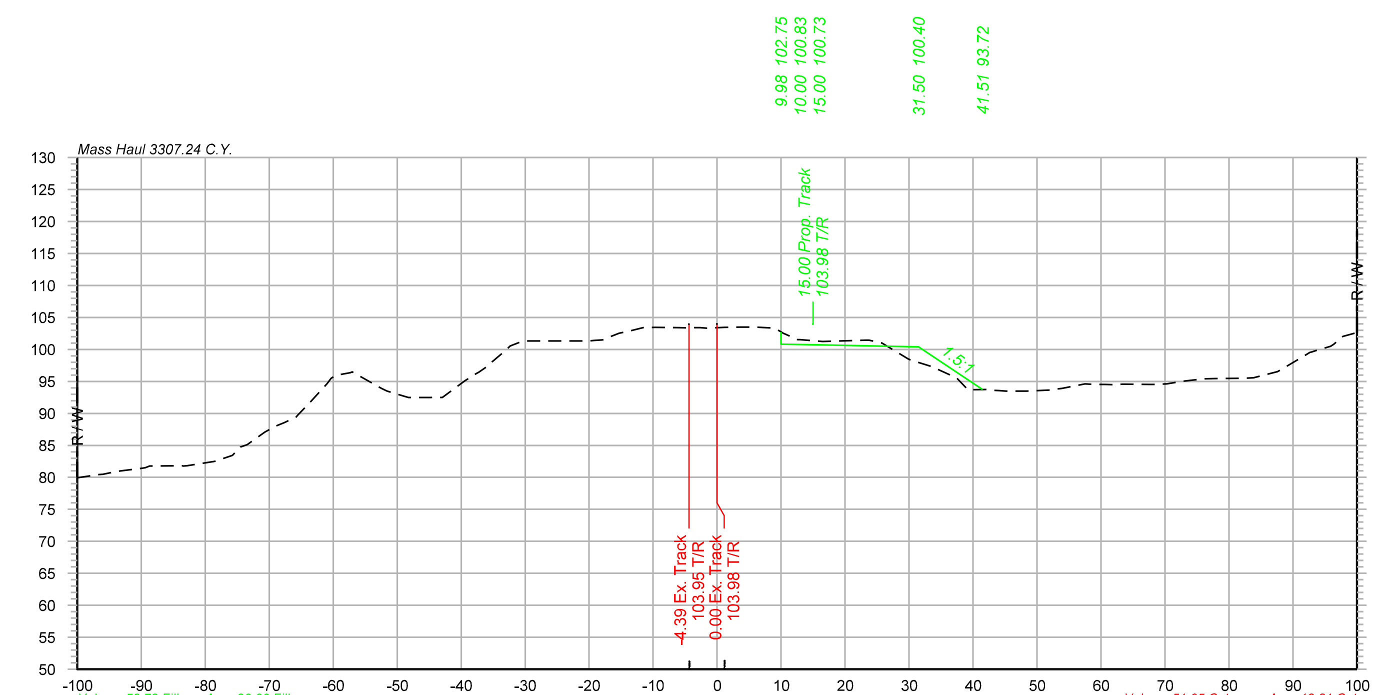
1656+00

-100.00	79.37
-95.07	79.37
-91.04	79.37
-87.51	79.38
-84.35	79.36
-80.23	79.46
-73.90	79.59
-69.35	79.74
-65.90	79.95
-60.39	80.51
-54.59	81.51
-50.51	82.13
-47.31	83.12
-43.13	86.23
-38.12	89.78
-35.00	92.28
-30.82	98.80
-26.89	100.49
-22.23	100.54
-15.56	101.50
-11.17	103.31
-7.58	103.35
-3.45	103.19
1.01	103.23
4.10	103.26
7.36	103.42
11.02	102.22
14.09	101.54
18.04	100.51
21.97	100.26
26.95	99.36
30.61	98.76
35.20	96.14
38.60	94.09
41.80	92.56
46.35	92.50
50.07	92.54
53.49	92.85
59.34	93.33
62.59	93.28
66.95	93.43
70.67	93.24
75.30	93.59
79.48	95.36
83.81	97.95
86.92	99.20
90.21	100.33
95.66	101.40
98.76	101.53



1653+90

-100.00	98.57
-96.32	99.28
-93.23	100.14
-90.06	100.99
-86.64	100.62
-81.02	100.72
-76.42	100.95
-73.00	100.89
-69.59	100.77
-65.56	100.68
-62.24	100.69
-57.20	100.60
-52.86	100.46
-49.63	100.49
-46.03	100.34
-42.40	100.34
-37.77	100.50
-32.66	100.71
-26.67	101.04
-23.36	101.43
-19.75	102.36
-15.80	103.28
-11.42	103.24
-7.24	103.26
-0.18	103.33
5.23	103.43
8.71	102.51
11.91	101.71
14.97	101.96
21.23	101.82
25.12	102.44
29.80	101.72
33.34	101.63
36.55	101.46
44.09	100.01
47.54	98.43
53.00	97.68
57.34	98.21
61.66	99.12
64.86	100.50
69.61	101.49
75.41	102.48
78.58	103.50
82.32	102.93
85.67	103.24
90.30	103.05
93.81	102.99
97.58	102.73



1655+00

-100.00	79.94
-96.63	80.43
-91.78	81.18
-88.72	81.76
-83.63	81.80
-78.66	82.47
-74.55	84.75
-70.70	87.06
-67.60	88.56
-63.59	91.76
-60.33	95.48
-57.03	96.48
-52.43	93.89
-48.93	92.71
-44.74	92.49
-39.39	95.11
-35.49	97.66
-32.39	100.49
-22.18	101.32
-17.90	101.50
-13.57	102.92
-9.66	103.43
-6.09	103.40
-2.62	103.41
1.12	103.44
5.94	103.48
9.24	103.20
12.57	101.54
16.47	101.24
23.27	101.45
29.90	98.50
33.52	97.33
36.73	95.85
42.02	93.73
45.12	93.48
48.14	93.49
52.08	93.65
57.51	94.60
60.66	94.51
67.73	94.54
72.81	95.03
76.04	95.40
81.91	95.48
87.61	96.53
92.17	99.21
95.91	100.50
99.95	102.60

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

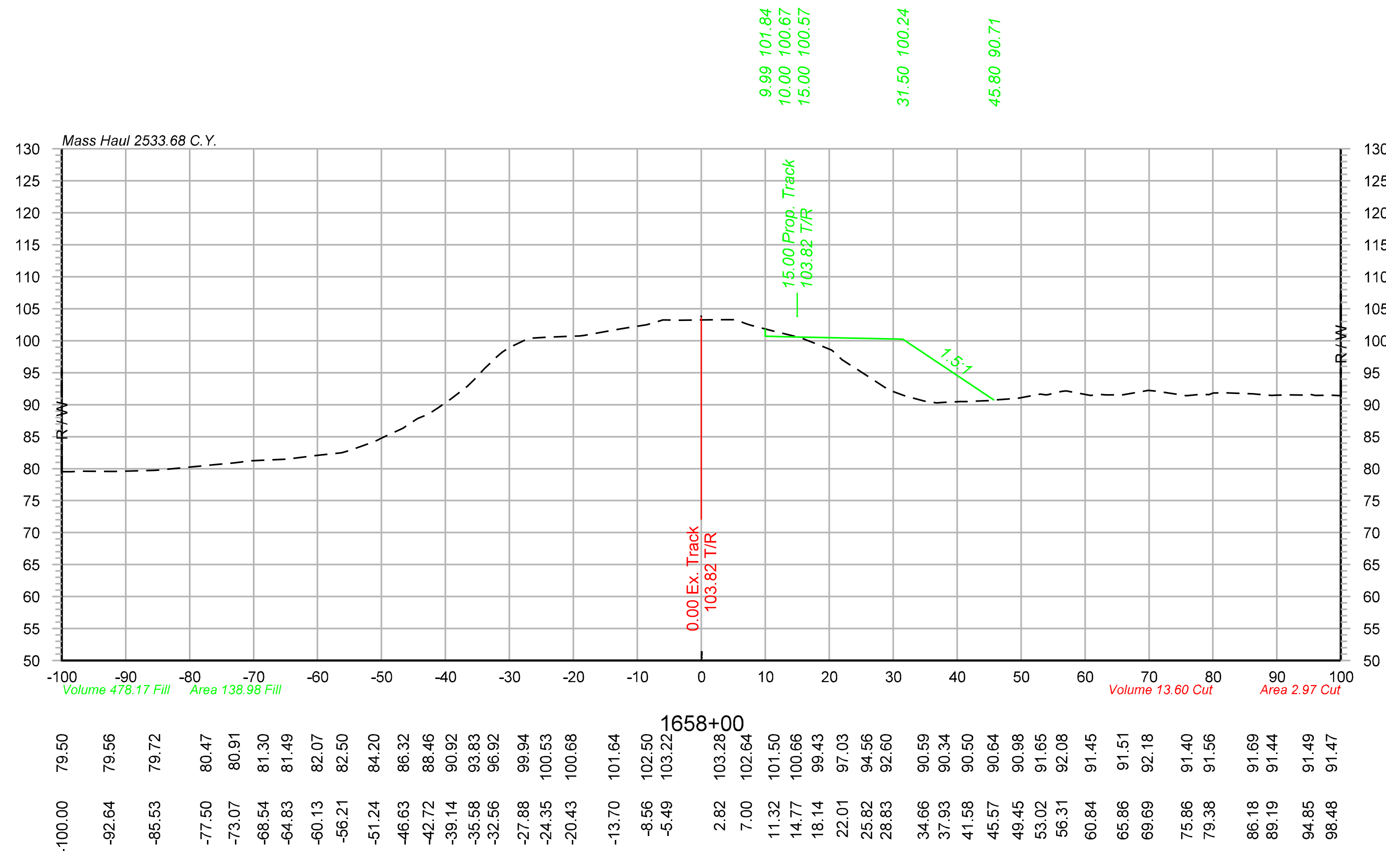
UNION PACIFIC

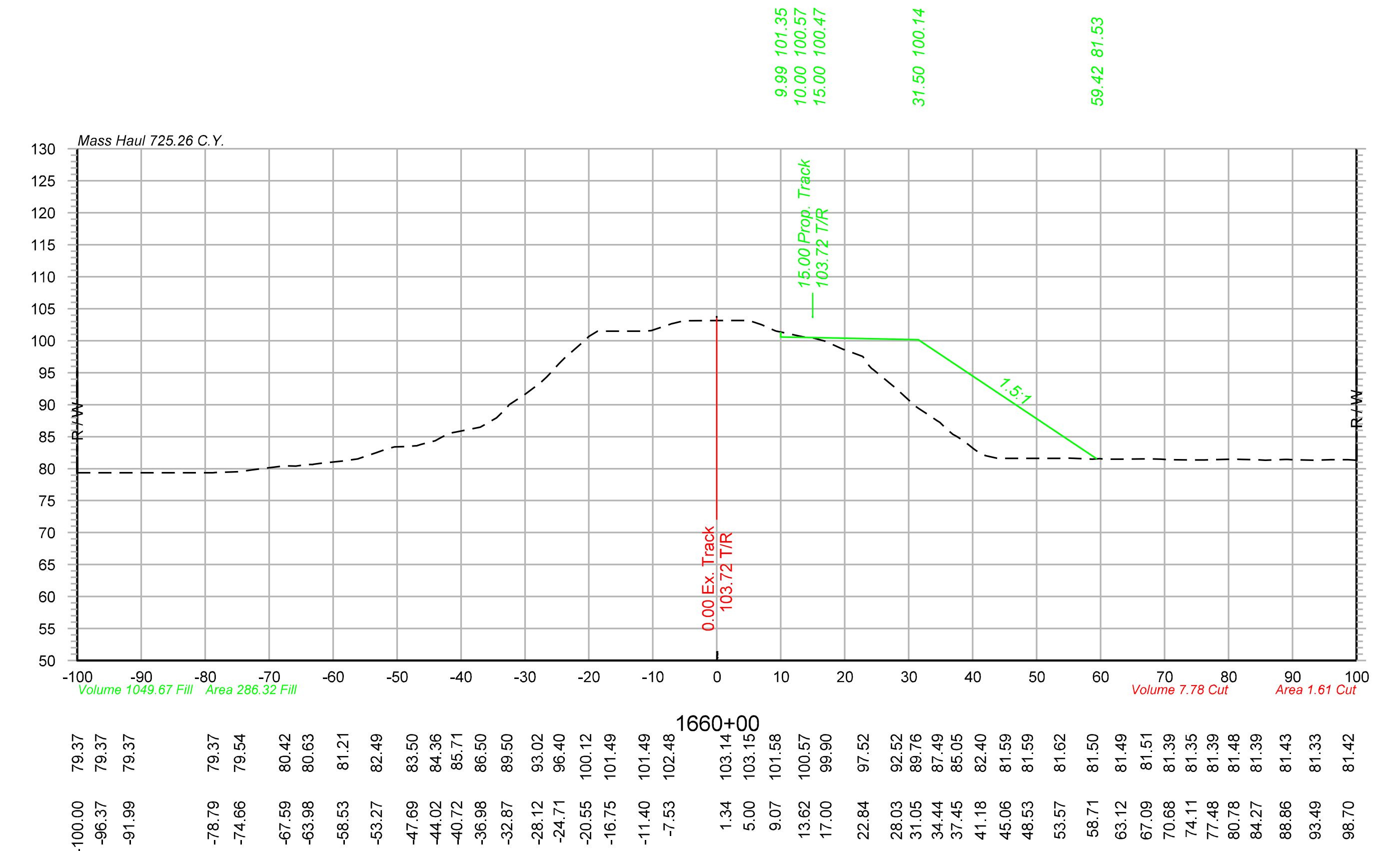
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 065 of 139

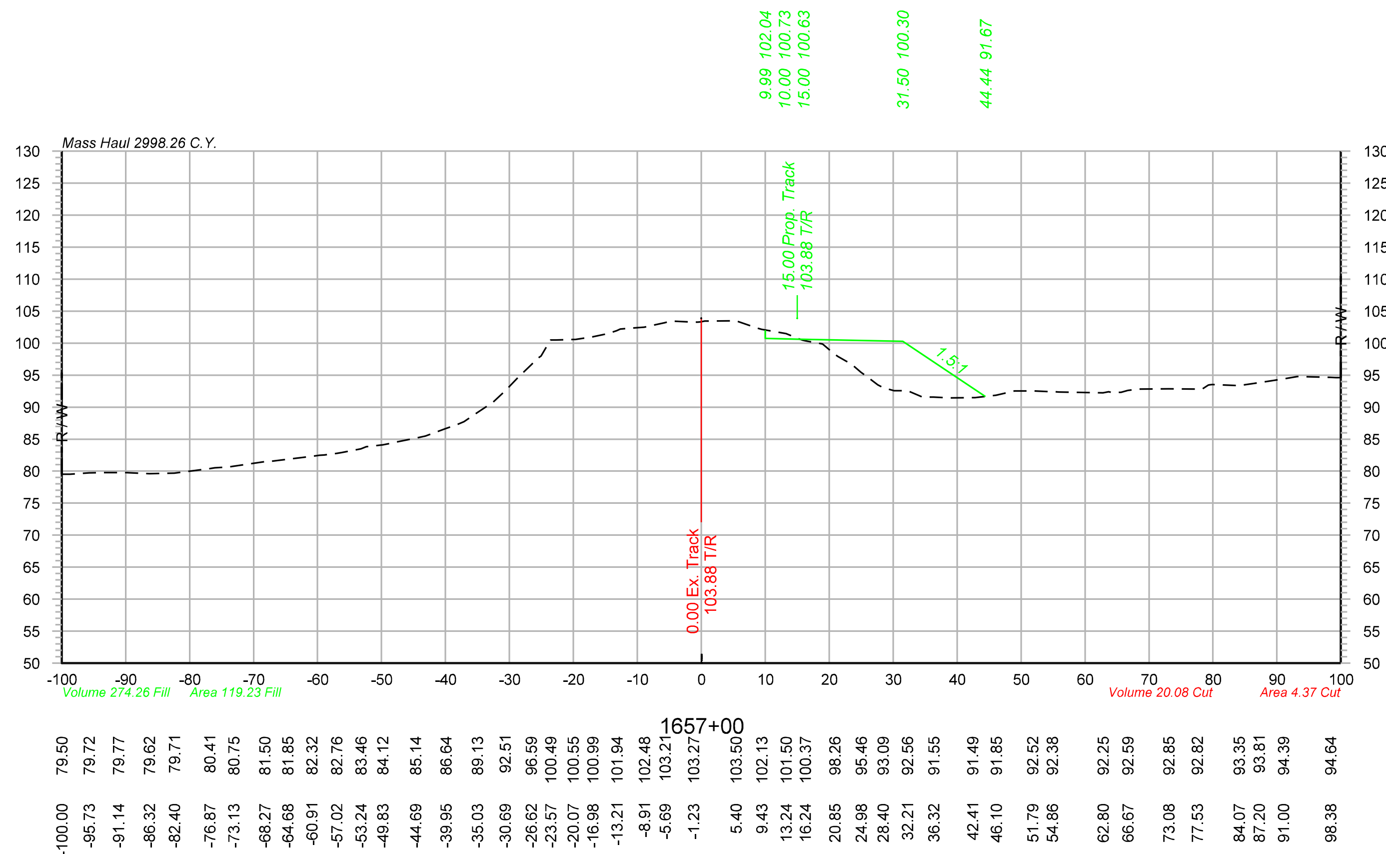
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

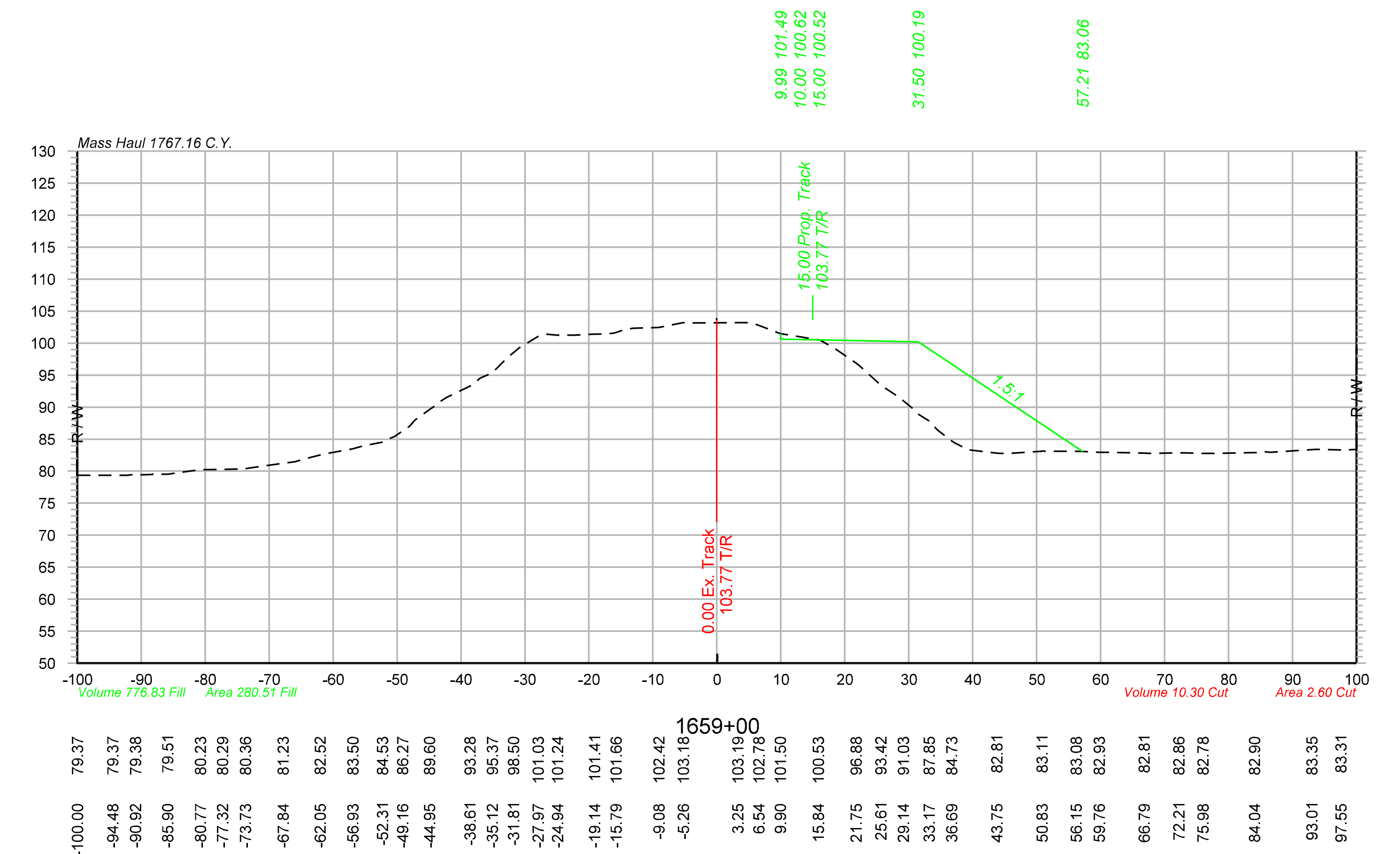
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1653+90 TO STA.1656+00







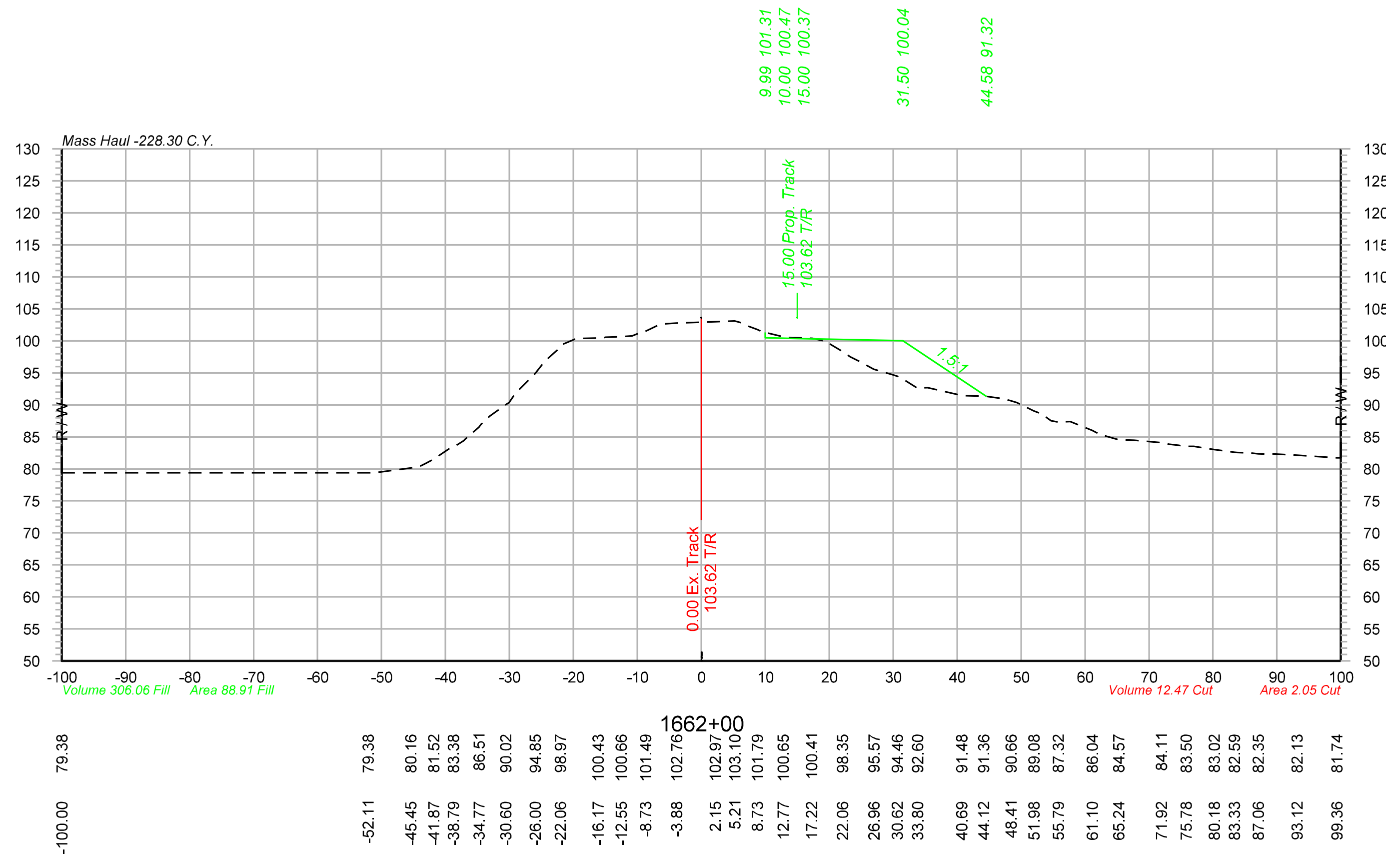


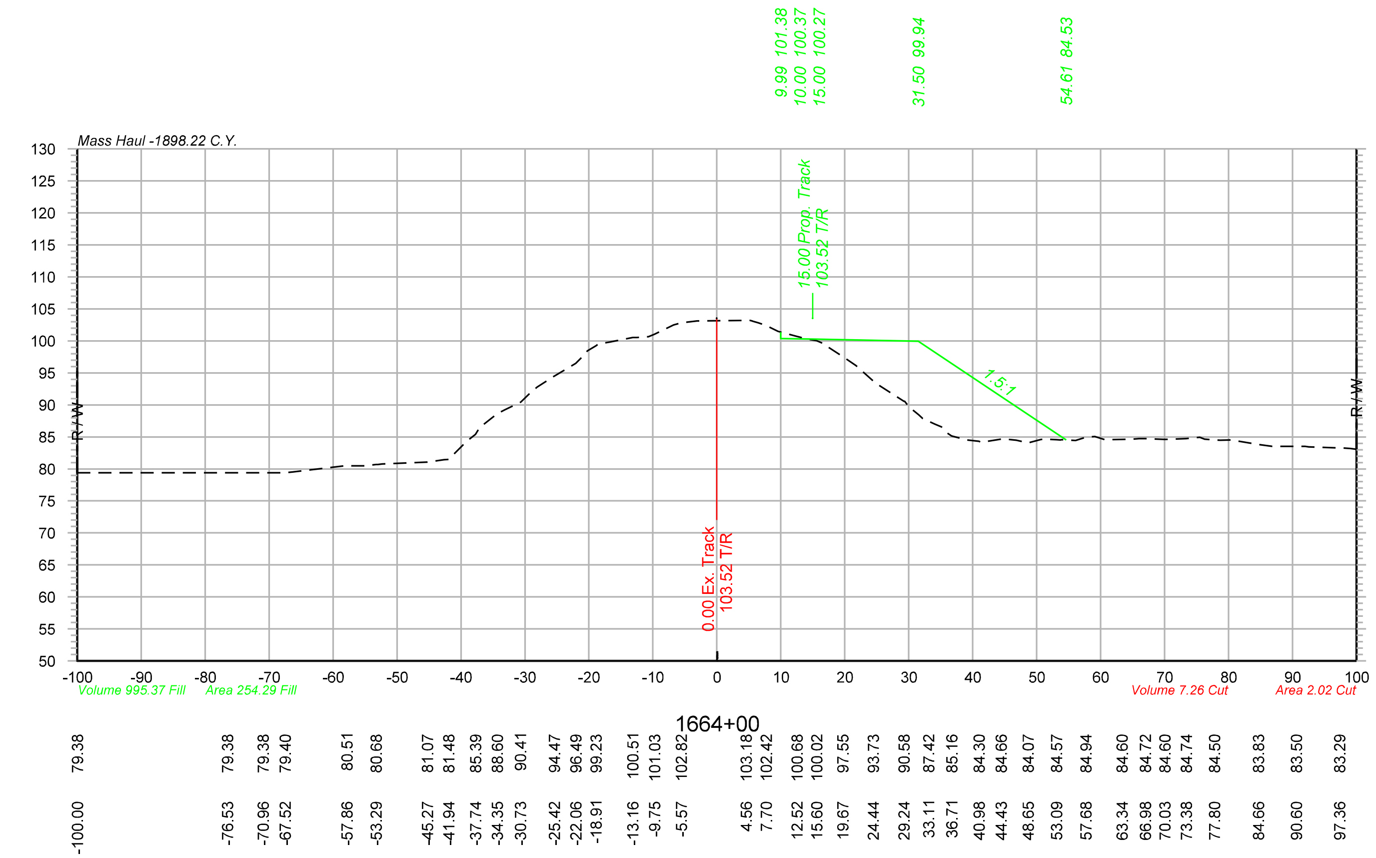
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

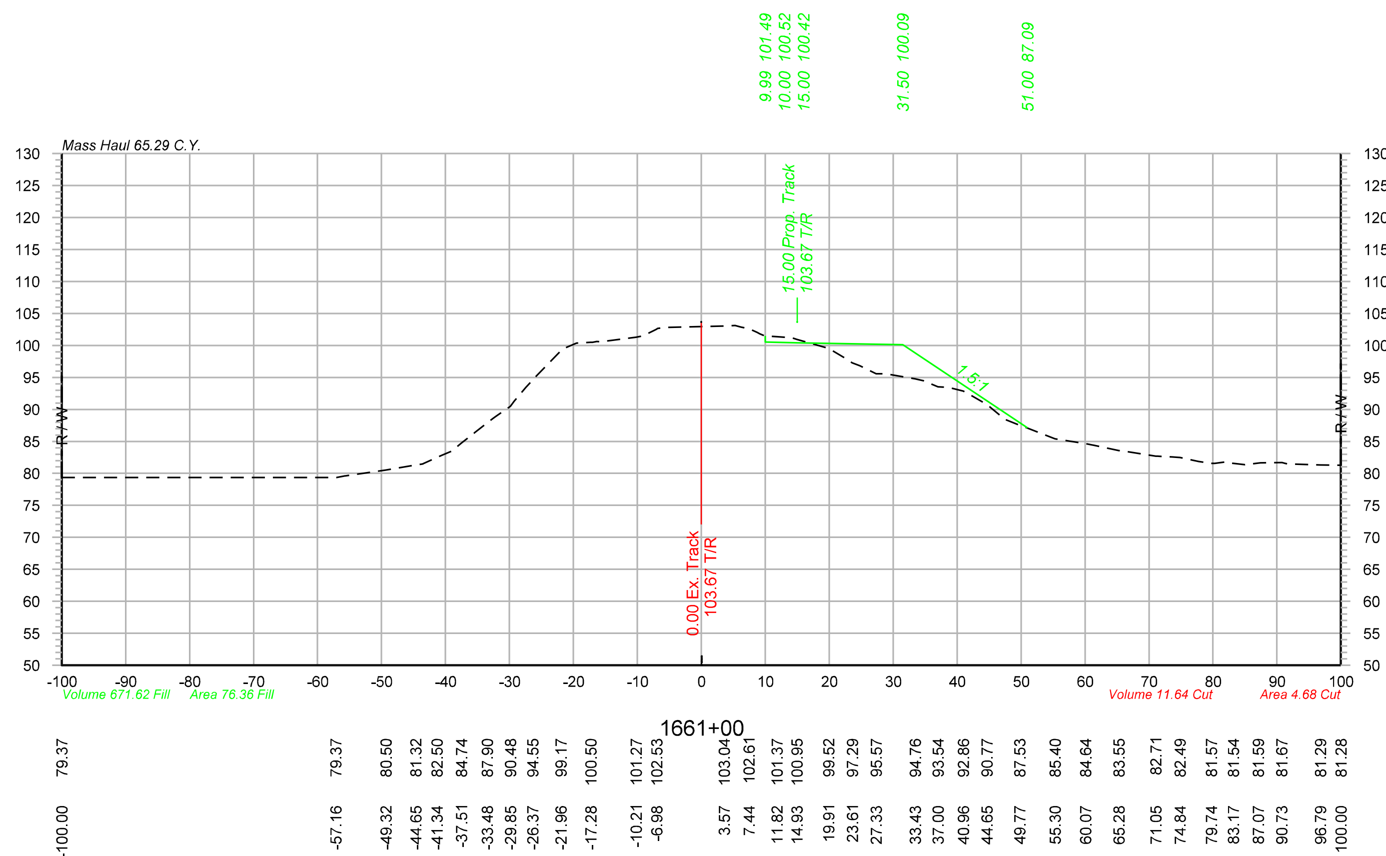
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

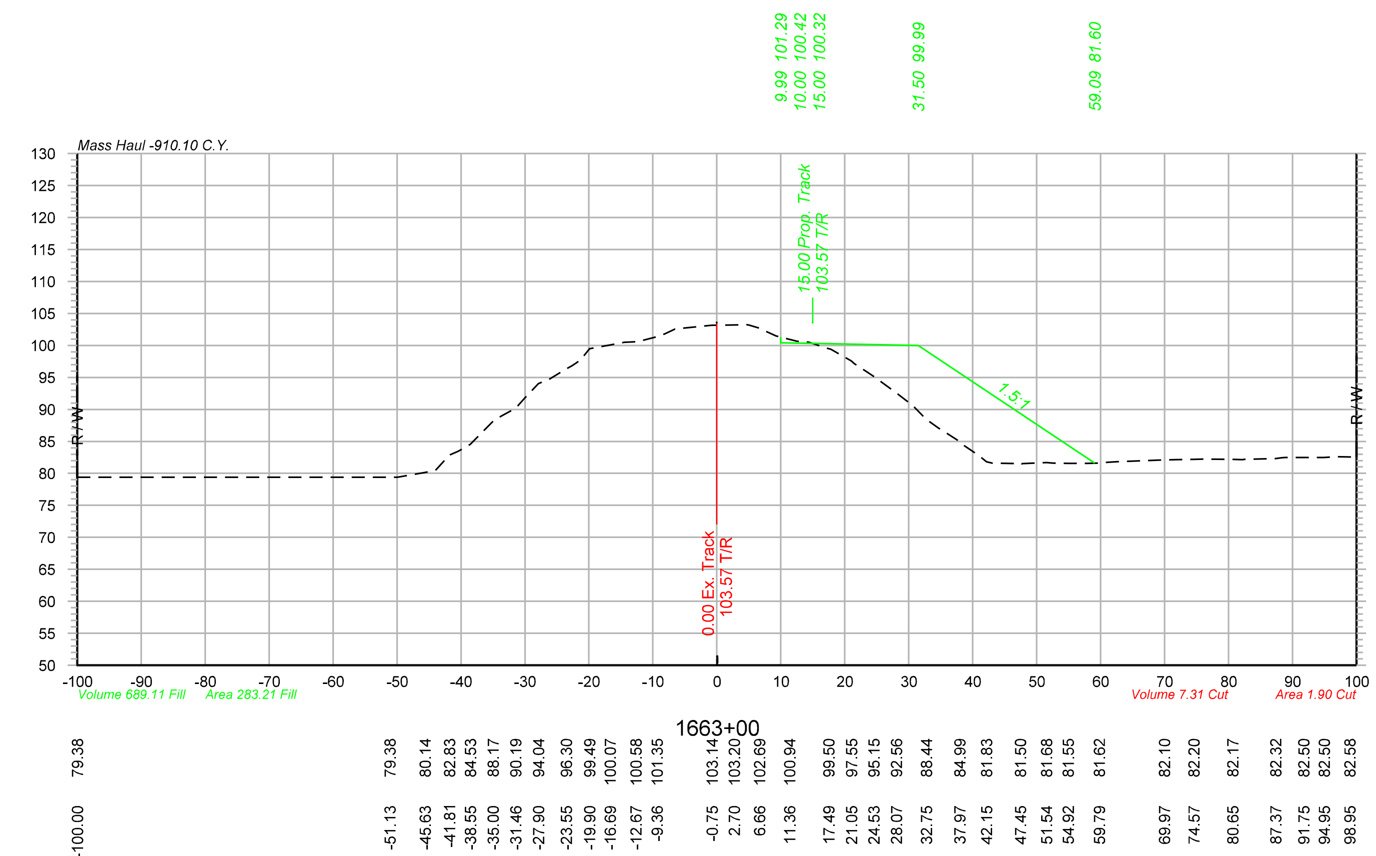
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 066 of 139	SHEET TITLE: CROSS SECTIONS STA.1657+00 TO STA.1660+00









OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 067 of 139

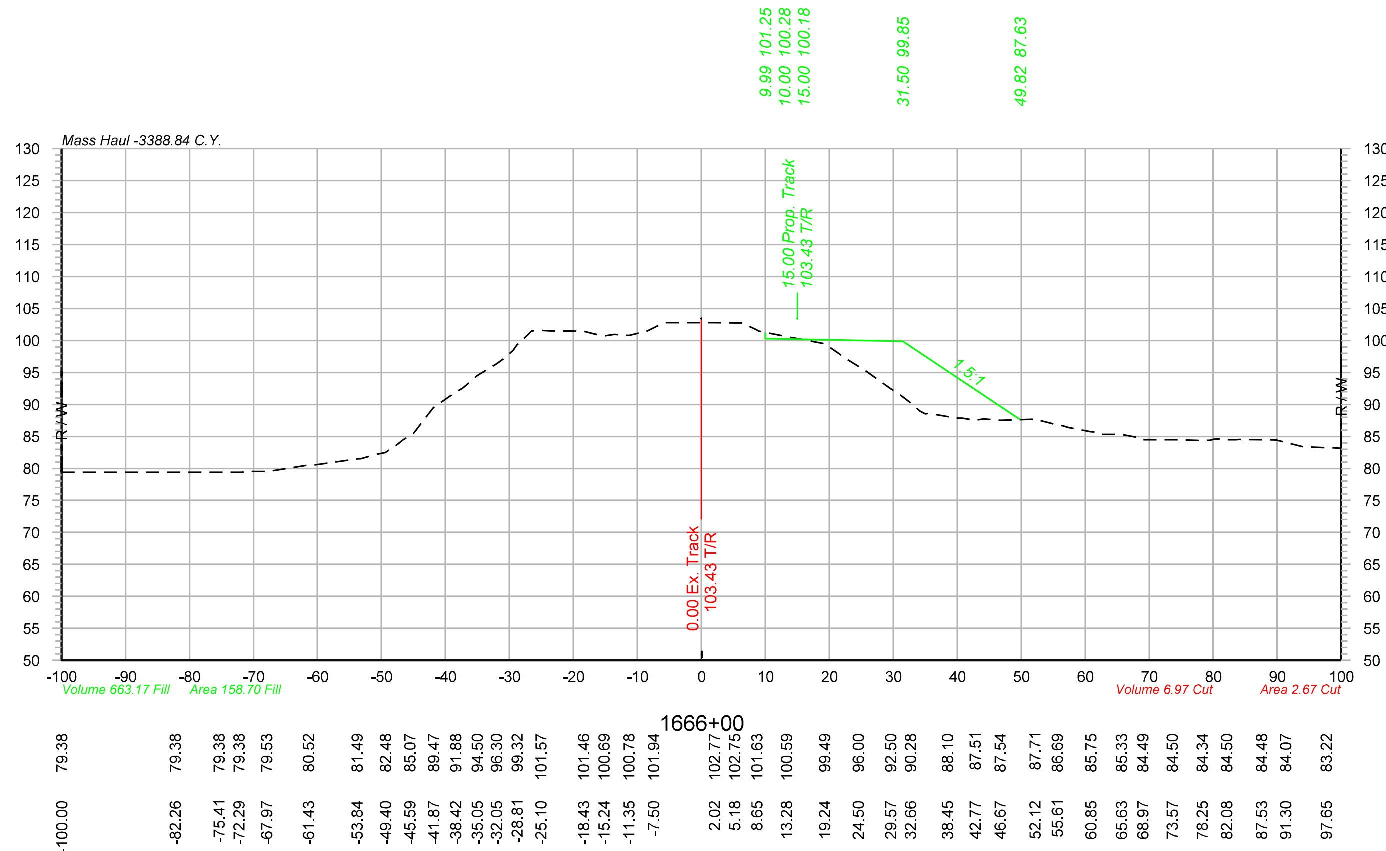
UNION PACIFIC RAILROAD

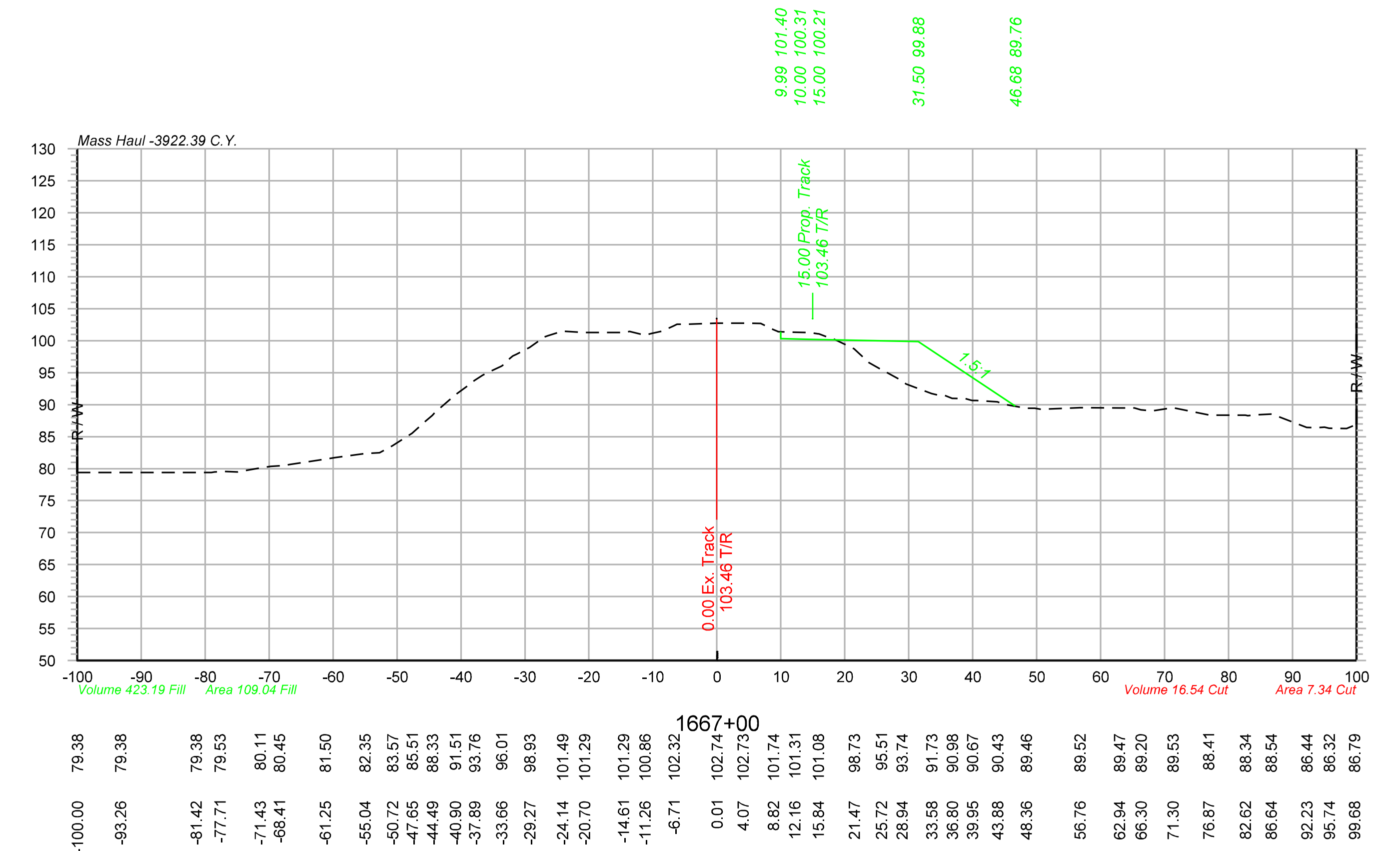
Office of Assistant Vice President
Engineering Design/Construction

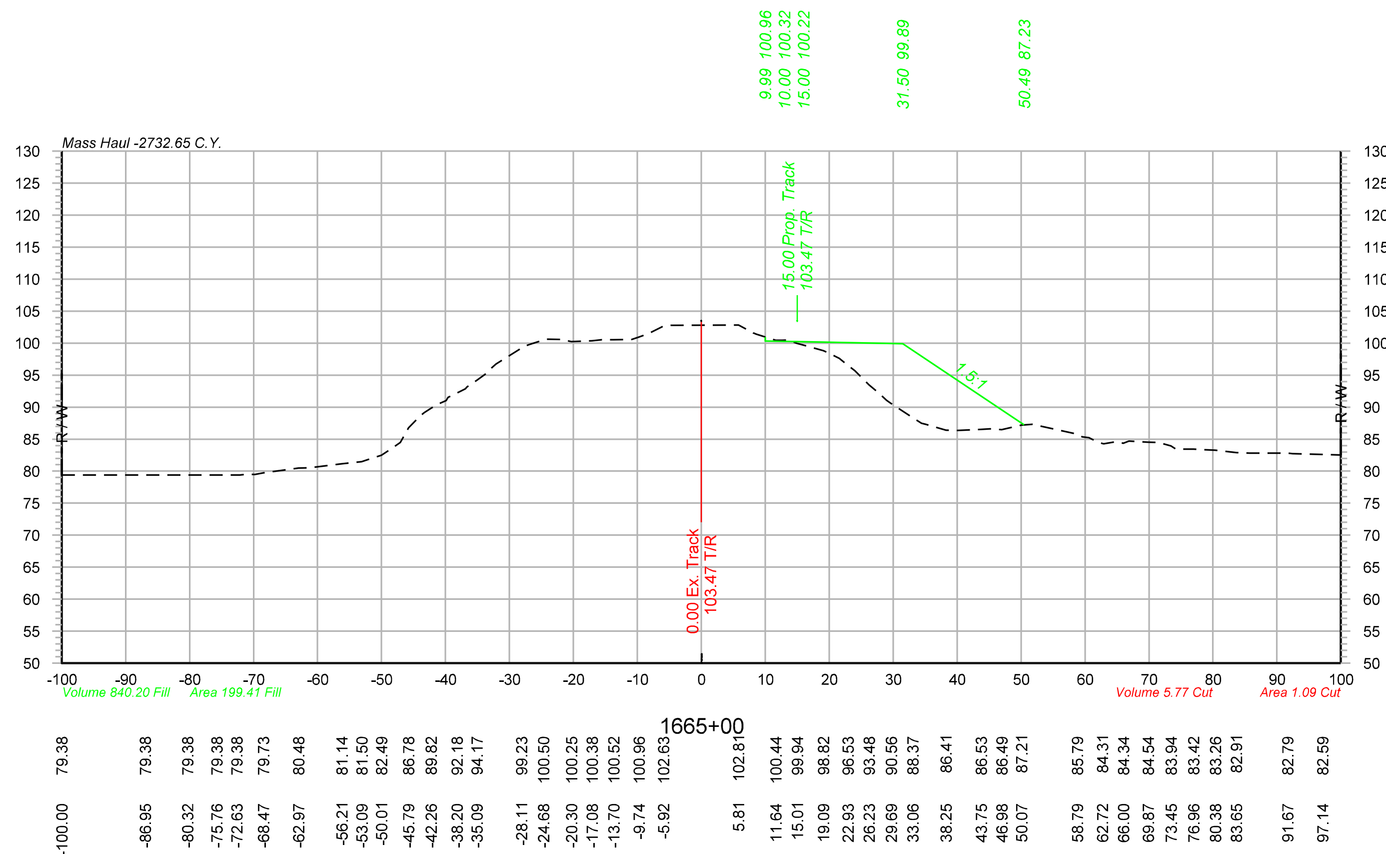
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

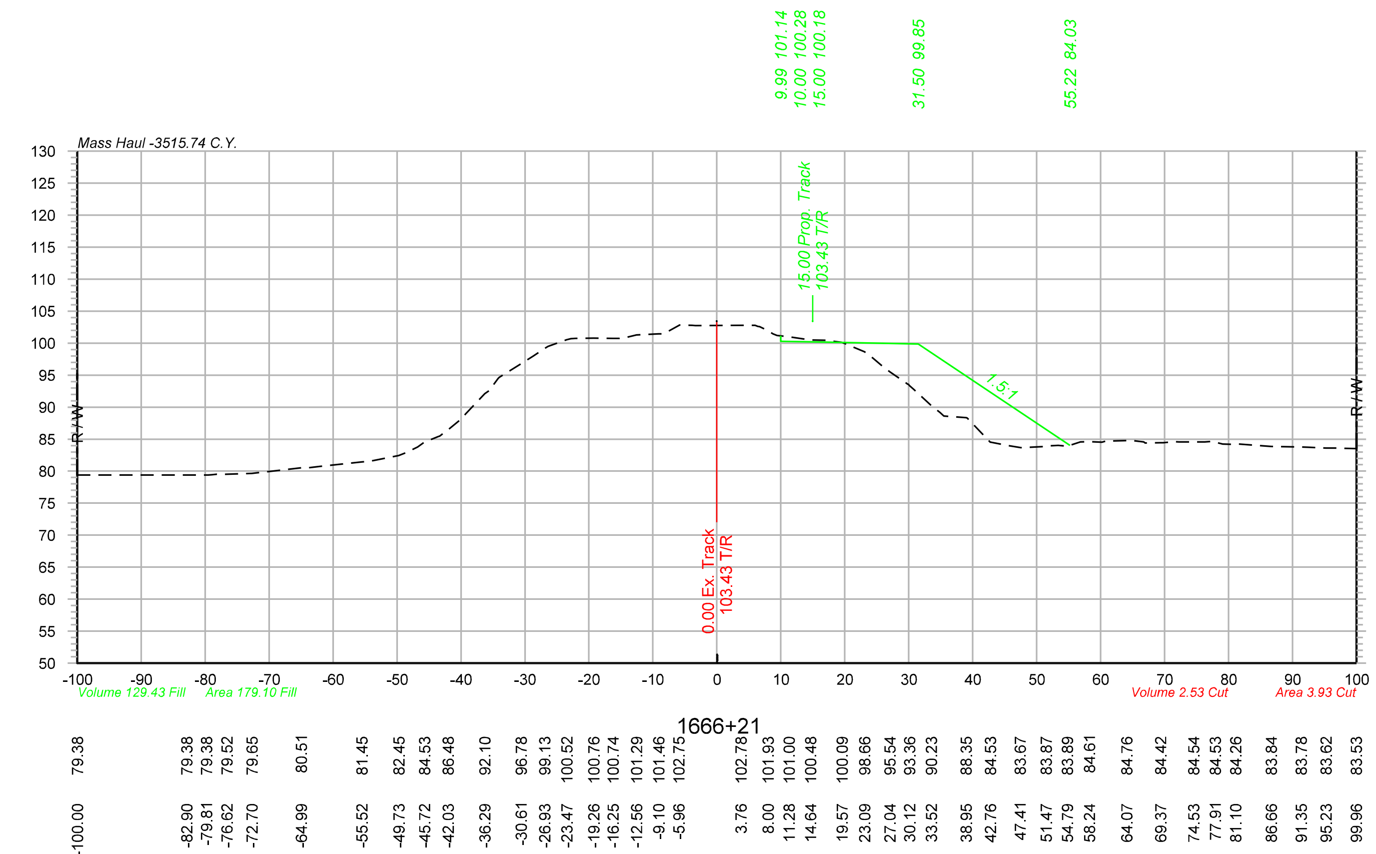
SHEET TITLE:
CROSS SECTIONS STA.1661+00 TO STA.1664+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

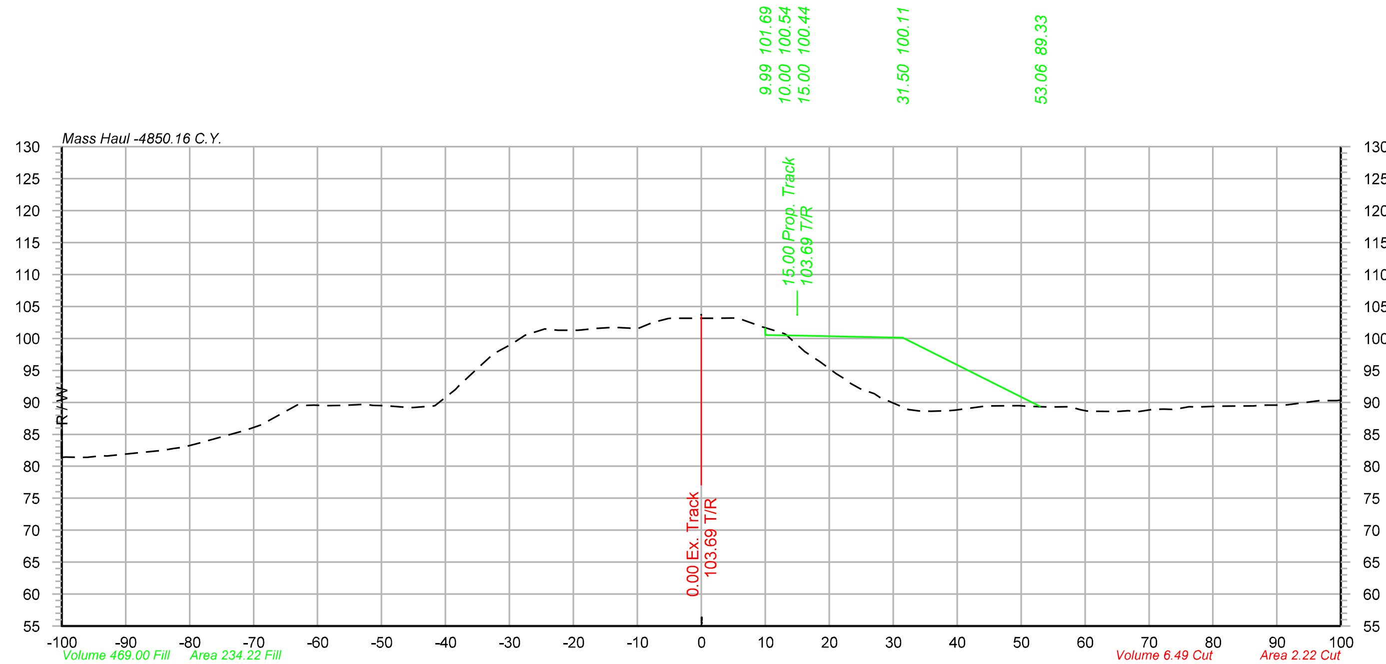
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 068 of 139

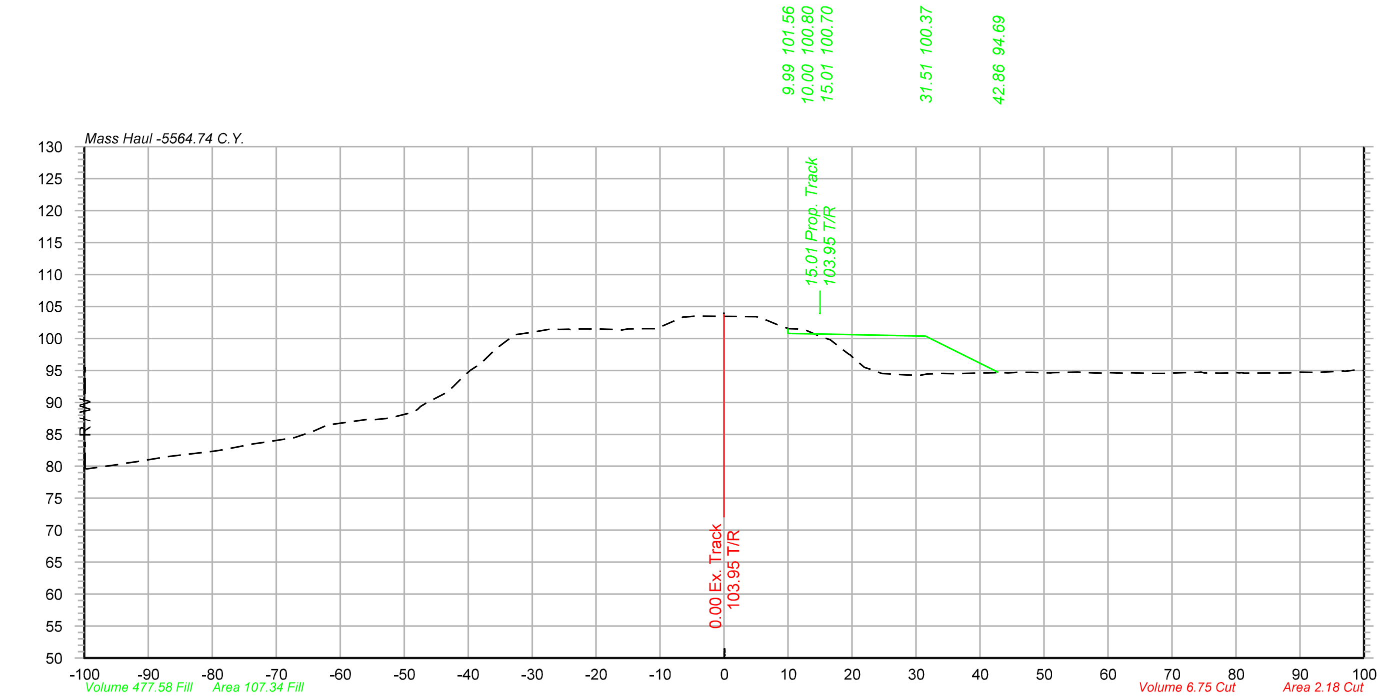
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

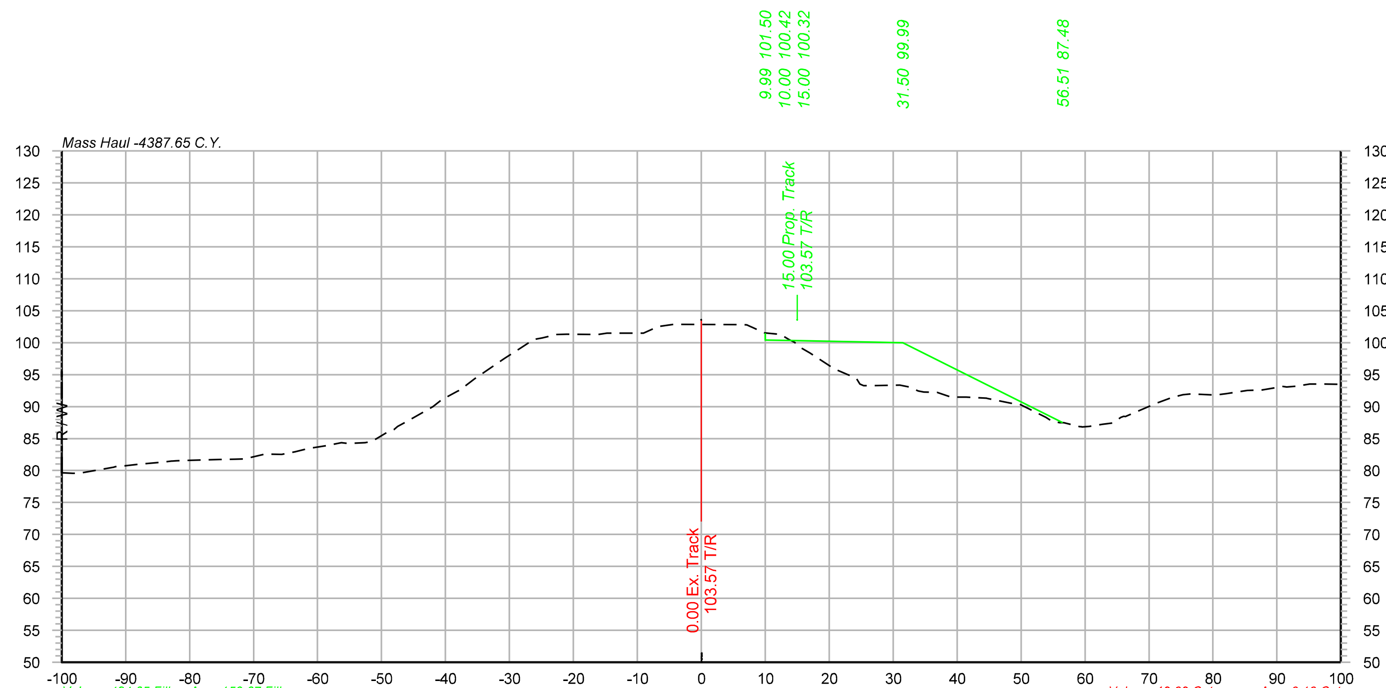
SHEET TITLE:
CROSS SECTIONS STA.1665+00 TO STA.1667+00



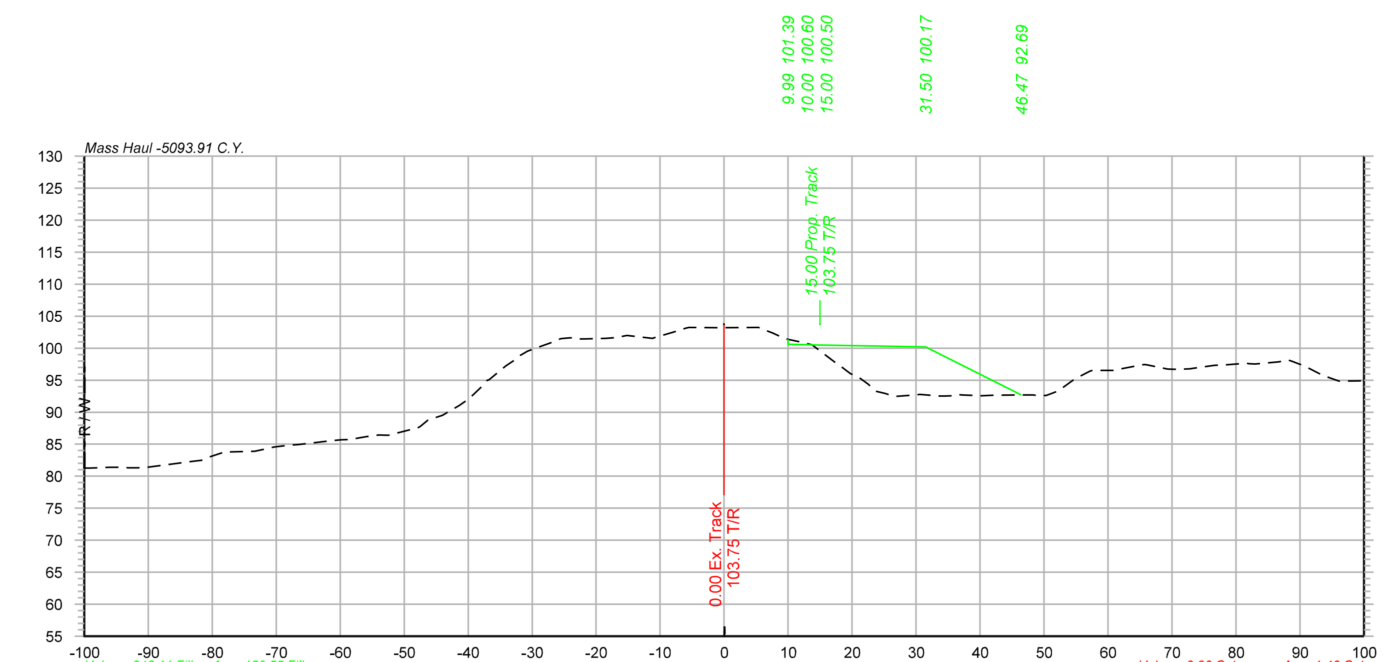
Offset	Elevation
-100.00	81.41
-96.60	81.39
-93.51	81.64
-89.73	81.93
-85.13	82.40
-81.03	82.99
-73.00	85.15
-68.82	86.47
-63.16	89.59
-58.65	89.48
-55.15	89.57
-51.33	89.51
-45.70	89.17
-41.81	89.45
-38.47	91.99
-35.43	94.90
-32.21	97.75
-27.62	100.45
-24.48	101.49
-19.25	101.29
-13.63	101.74
-10.05	101.48
-5.15	103.10
-0.45	103.14
5.69	103.20
9.02	101.97
13.01	100.75
16.17	97.96
19.95	95.33
23.36	92.92
26.92	91.41
32.43	88.86
35.86	88.59
39.10	88.74
44.30	89.38
49.74	89.46
54.41	89.29
57.64	89.32
61.13	88.60
64.91	88.58
68.15	88.51
72.34	88.95
76.29	89.30
80.91	89.39
85.94	89.44
90.14	89.57
96.70	90.28
100.00	90.36



Offset	Elevation
-100.00	79.66
-94.43	80.33
-86.94	81.50
-79.83	82.37
-73.48	83.50
-67.16	84.49
-63.07	85.97
-55.89	87.29
-52.76	87.46
-48.34	88.50
-43.38	91.53
-39.70	94.99
-35.70	98.35
-29.87	100.99
-26.45	101.47
-22.54	101.48
-17.31	101.38
-12.67	101.54
-6.39	103.37
0.41	103.42
5.03	103.39
8.82	101.93
12.92	101.22
16.61	99.79
19.73	97.41
23.43	94.99
27.36	94.37
30.67	94.25
34.09	94.51
40.38	94.61
44.39	94.63
48.12	94.71
51.36	94.63
55.20	94.73
59.20	94.58
62.29	94.56
66.69	94.53
71.88	94.67
75.03	94.60
79.65	94.62
88.03	94.60
91.93	94.68
96.75	94.88
100.00	94.99



Offset	Elevation
-100.00	79.64
-91.86	80.50
-88.00	80.96
-84.21	81.30
-81.10	81.54
-75.26	81.71
-71.44	81.81
-68.28	82.55
-63.50	82.95
-58.56	83.89
-55.24	84.22
-51.47	84.58
-48.04	86.40
-42.84	89.48
-38.06	92.42
-30.96	97.40
-26.33	100.41
-22.60	101.29
-16.12	101.29
-11.92	101.50
-7.01	102.38
6.53	102.81
9.87	101.51
13.73	100.48
16.98	98.39
20.80	95.91
24.00	94.51
31.05	93.37
34.82	92.26
39.07	91.50
44.60	91.30
48.42	90.50
53.89	88.32
59.20	86.87
62.73	87.22
66.05	88.48
71.26	90.55
75.33	91.86
80.19	91.82
85.37	92.53
90.93	93.14
95.10	93.50
100.00	93.50



Offset	Elevation
-100.00	81.24
-96.00	81.41
-91.74	81.32
-82.82	82.36
-78.24	83.75
-73.38	83.89
-70.35	84.56
-66.60	84.95
-61.61	85.53
-58.54	85.74
-53.99	86.43
-48.71	87.36
-43.98	89.53
-39.84	92.09
-36.73	95.06
-32.75	98.15
-28.55	100.32
-25.54	101.49
-21.76	101.46
-18.58	101.53
-15.19	101.97
-11.55	101.55
-7.85	102.52
-0.81	103.21
5.35	103.22
9.48	101.50
13.73	100.52
17.57	97.62
20.94	95.53
25.10	92.94
29.86	92.69
33.64	92.52
37.18	92.68
40.27	92.57
46.29	92.67
50.35	92.62
54.74	95.16
60.64	96.51
65.36	97.41
69.35	96.75
72.86	96.77
76.62	97.33
81.13	97.60
86.68	97.85
90.76	97.19
94.23	95.52
100.00	94.89

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

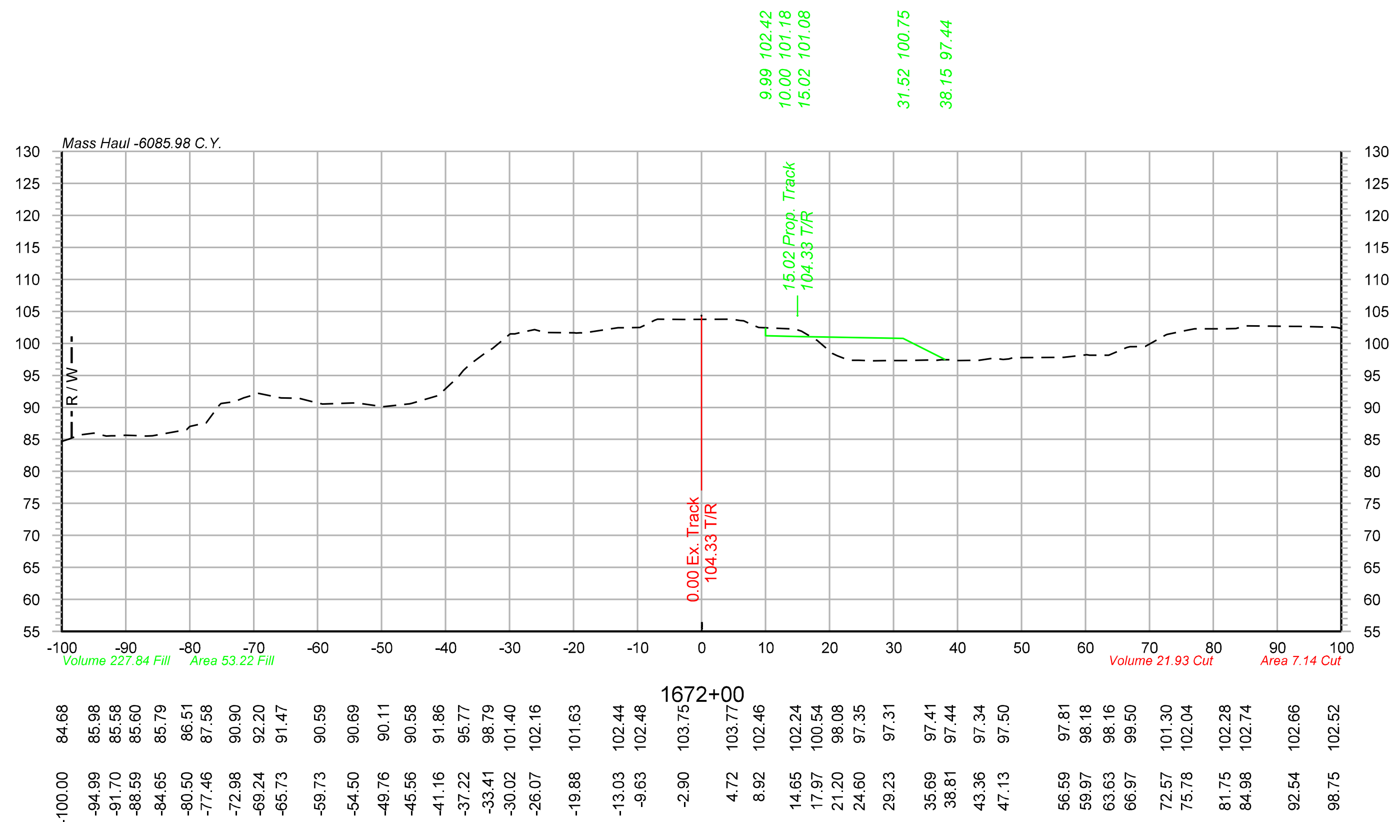
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 069 of 139

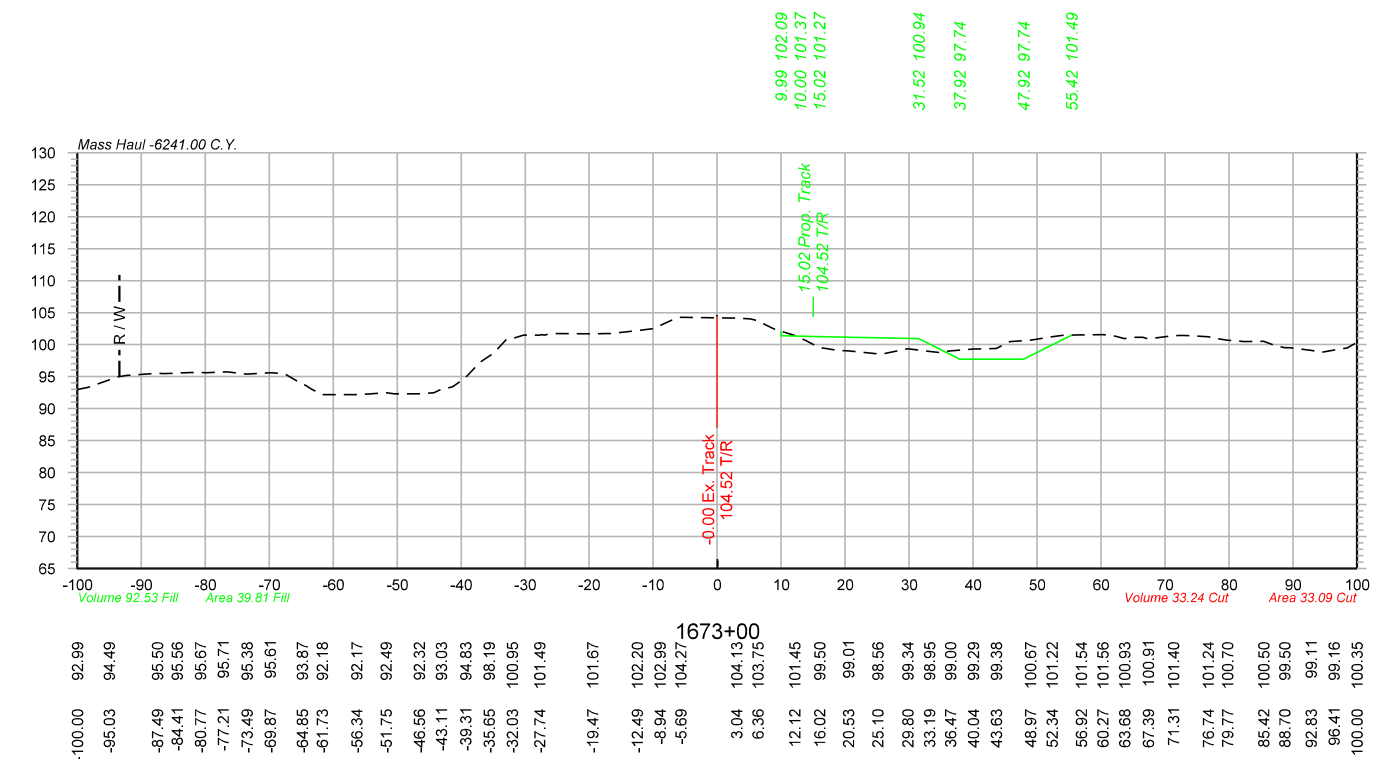
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

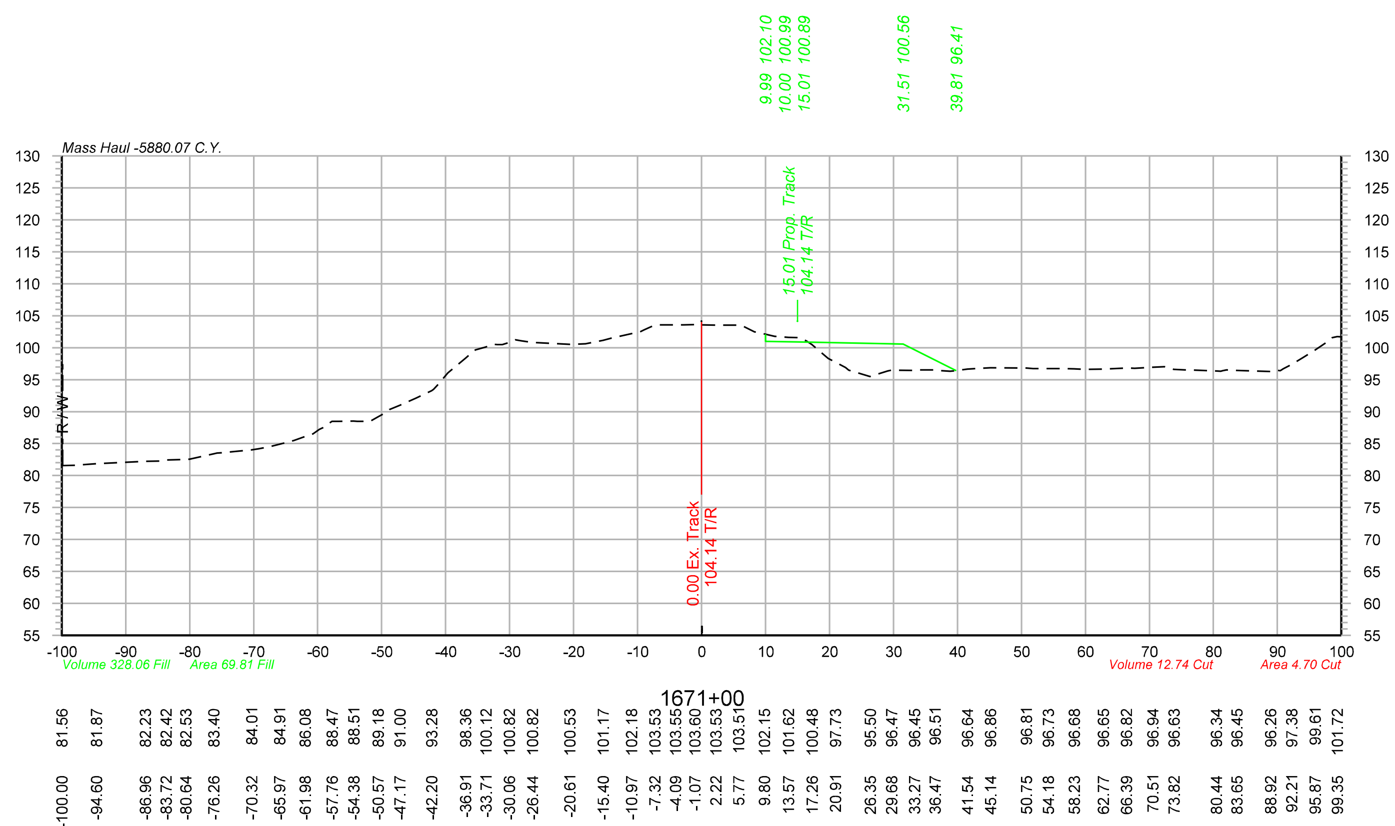
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

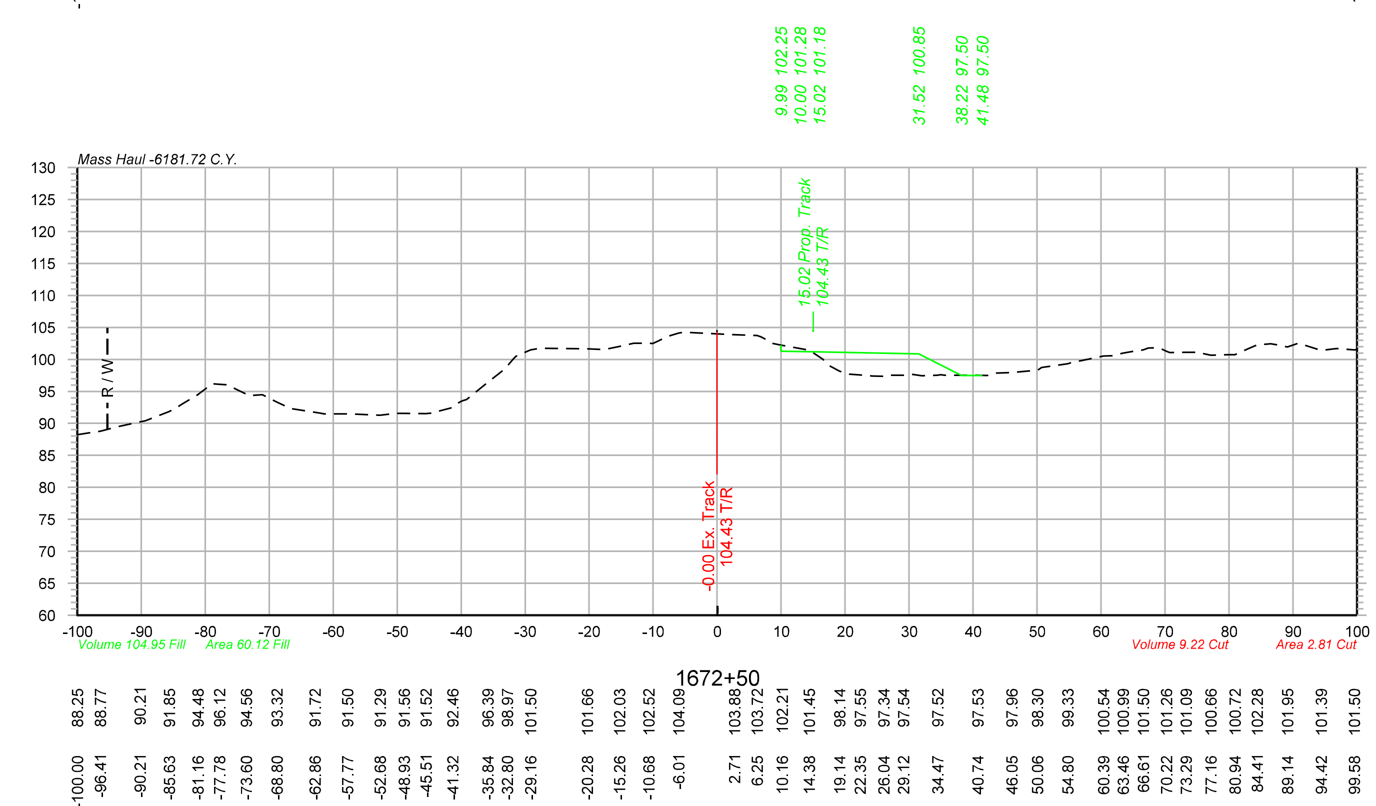
SHEET TITLE:
CROSS SECTIONS STA.1668+00 TO STA.1670+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014







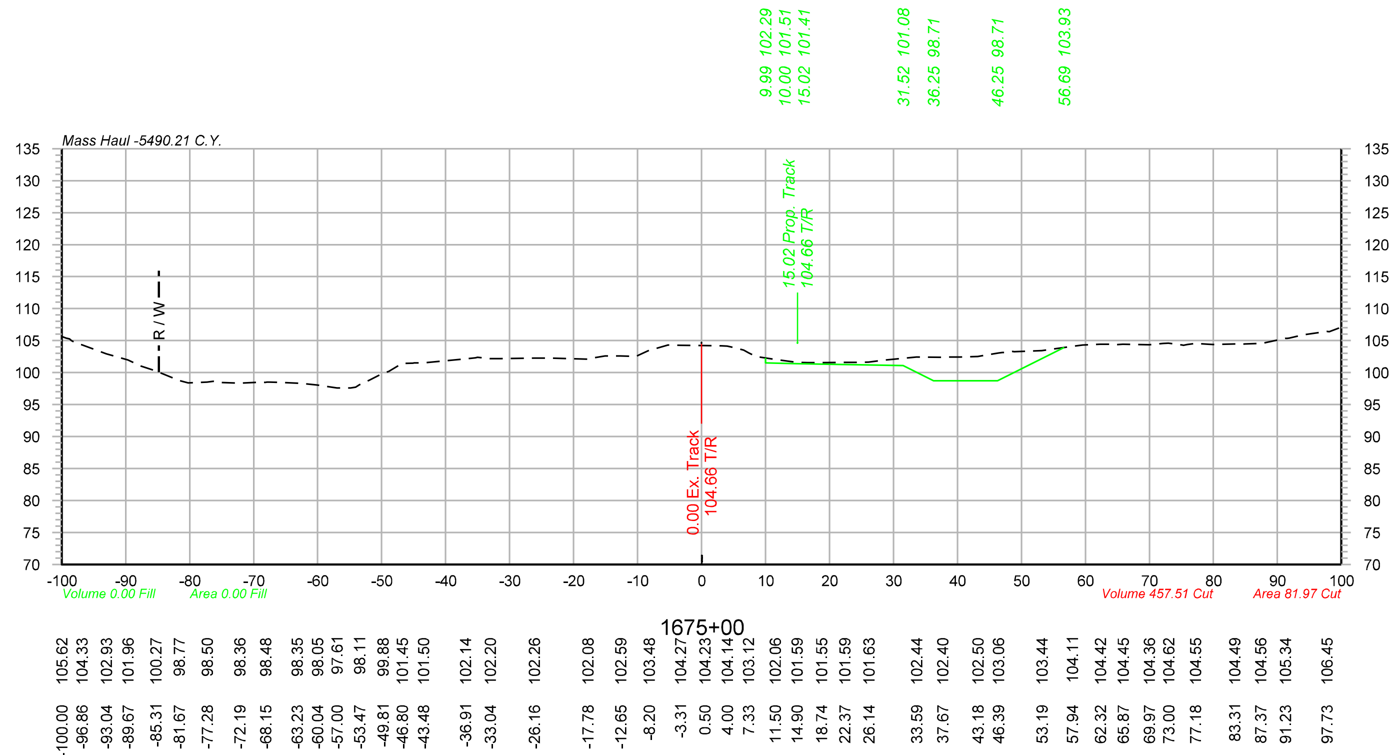


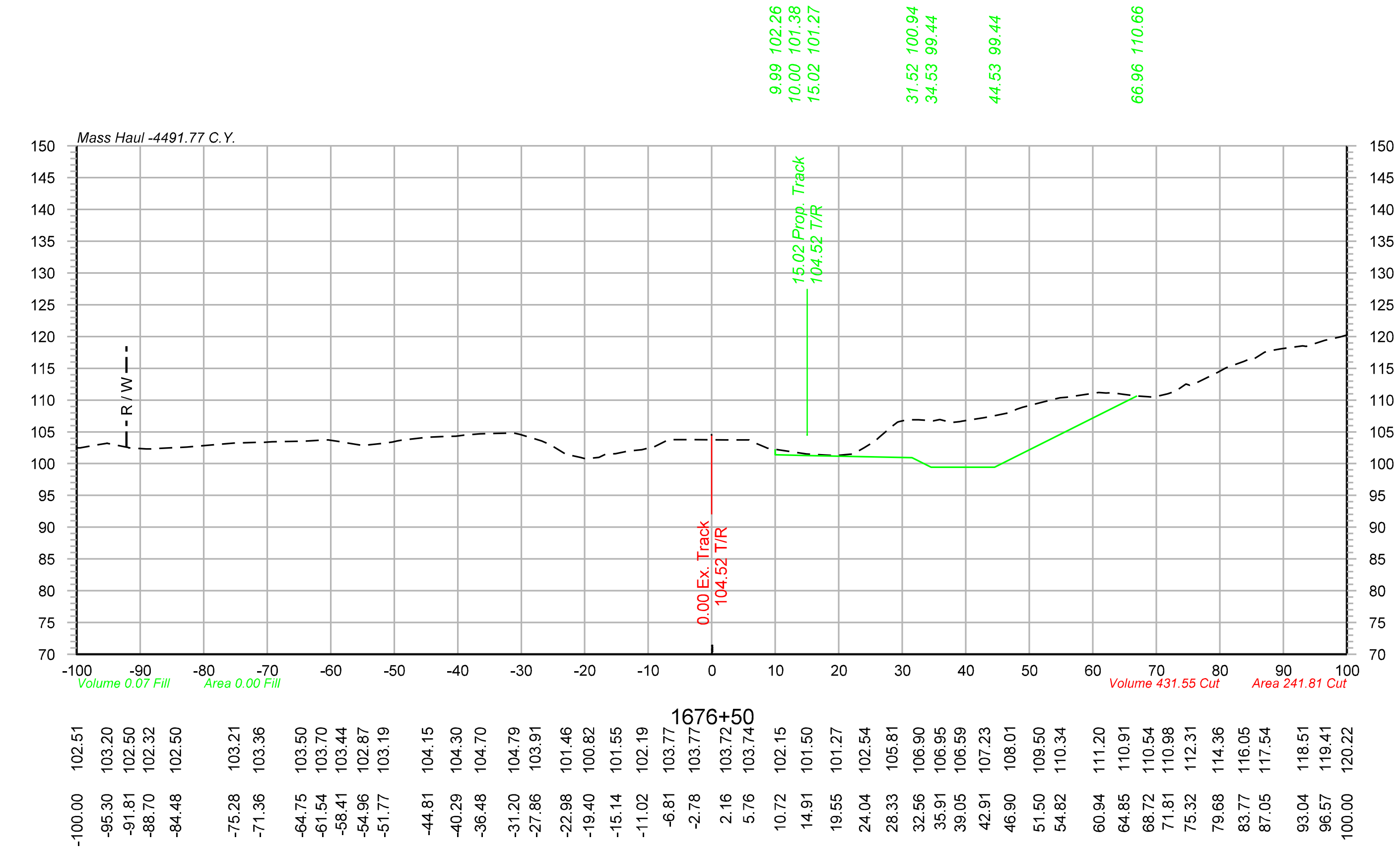
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

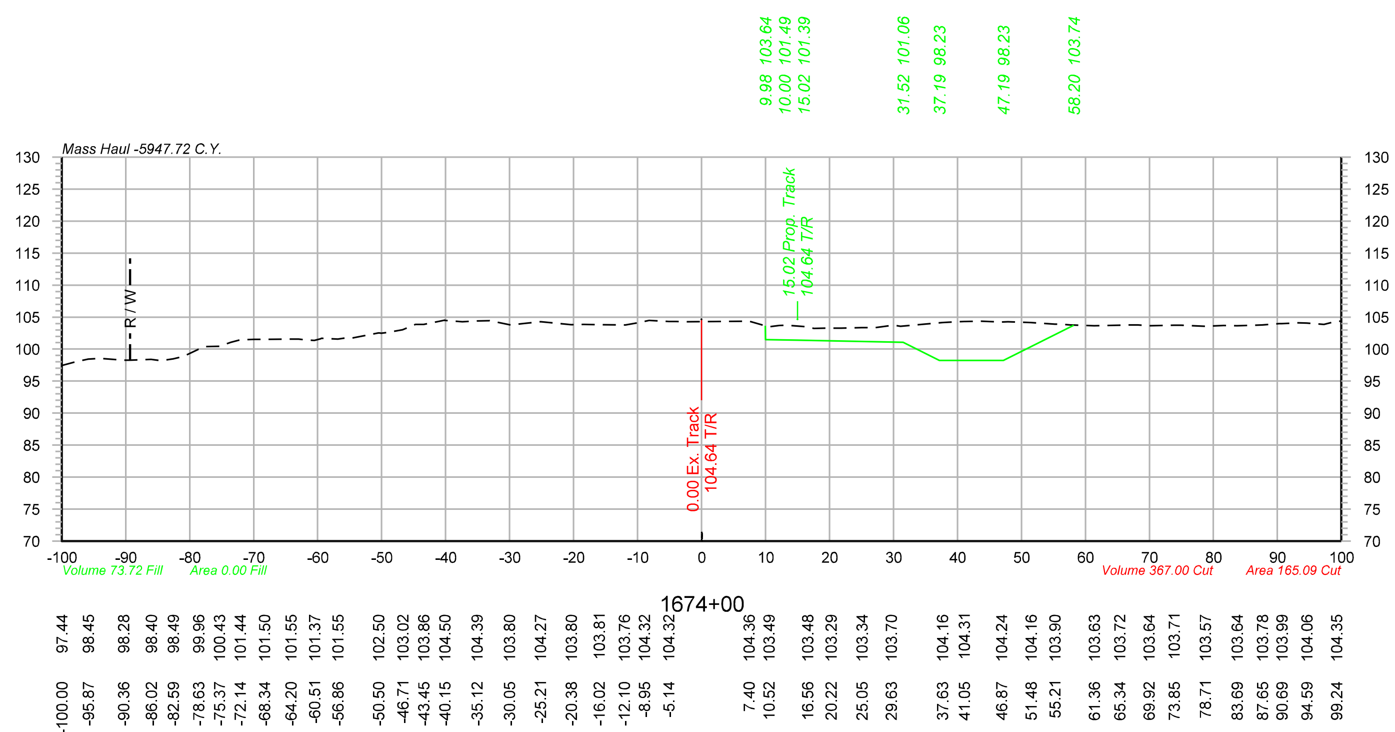
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

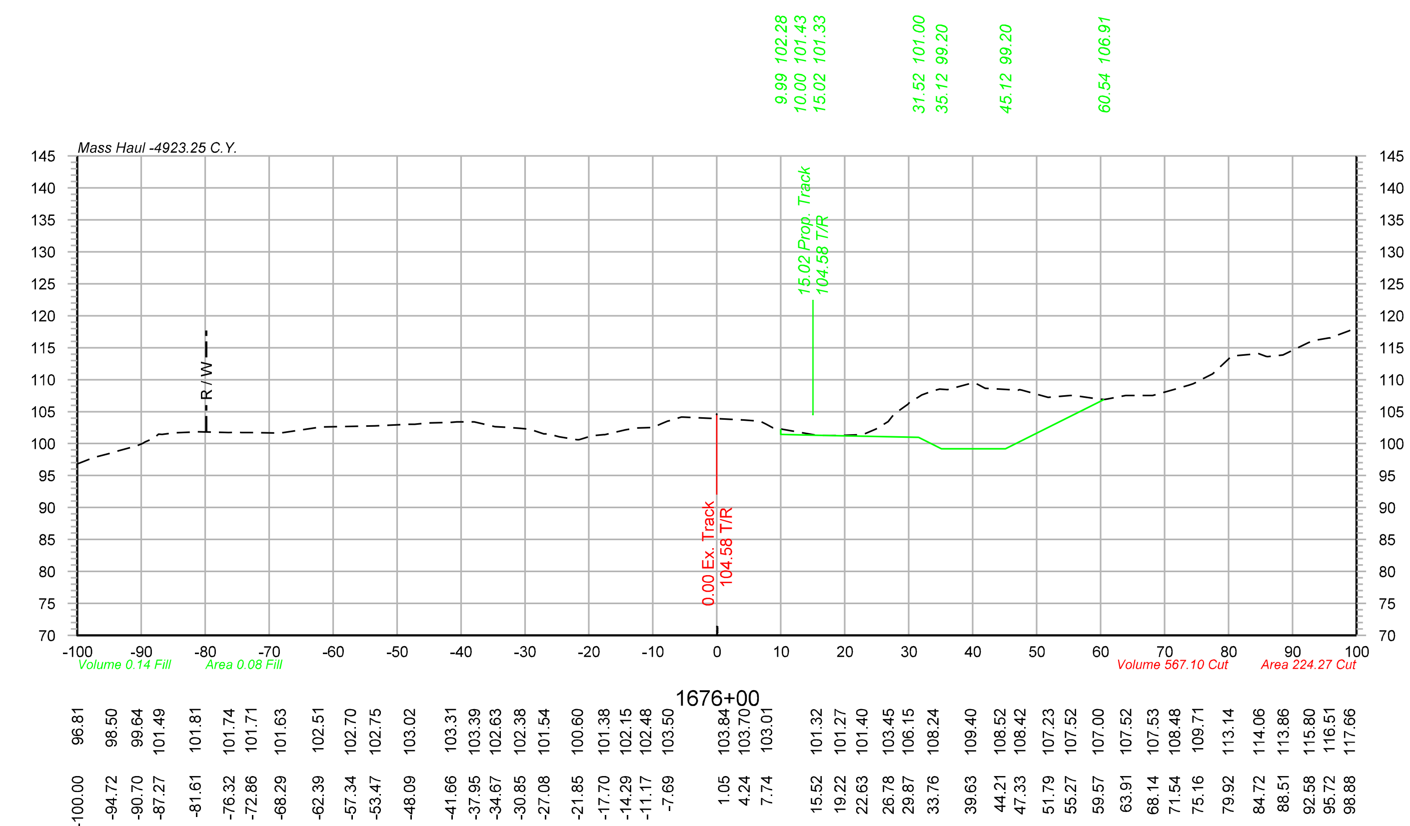
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 070 of 139	SHEET TITLE: CROSS SECTIONS STA.1671+00 TO STA.1673+00







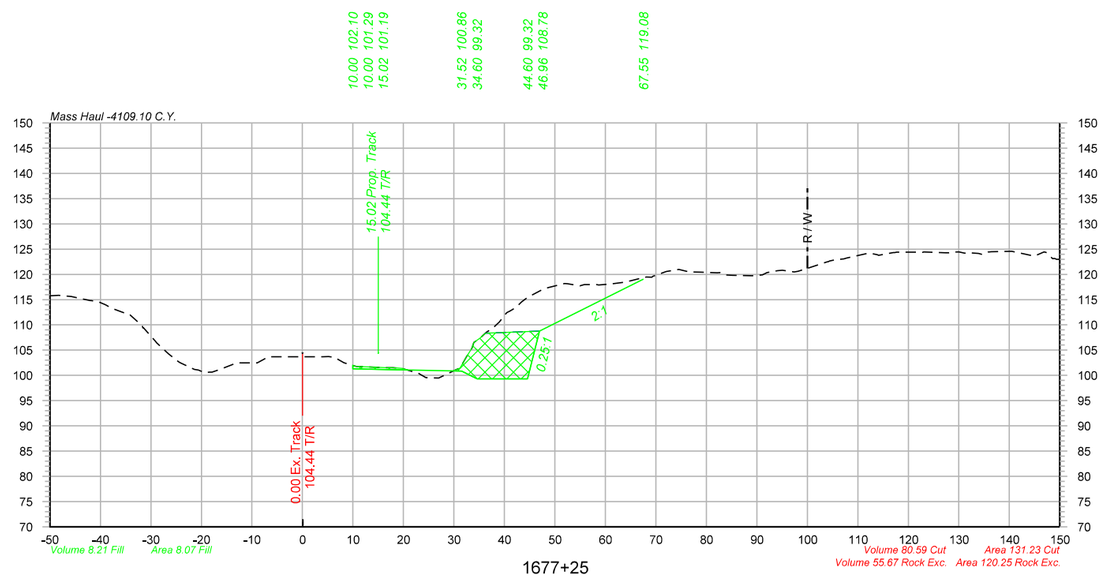


OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

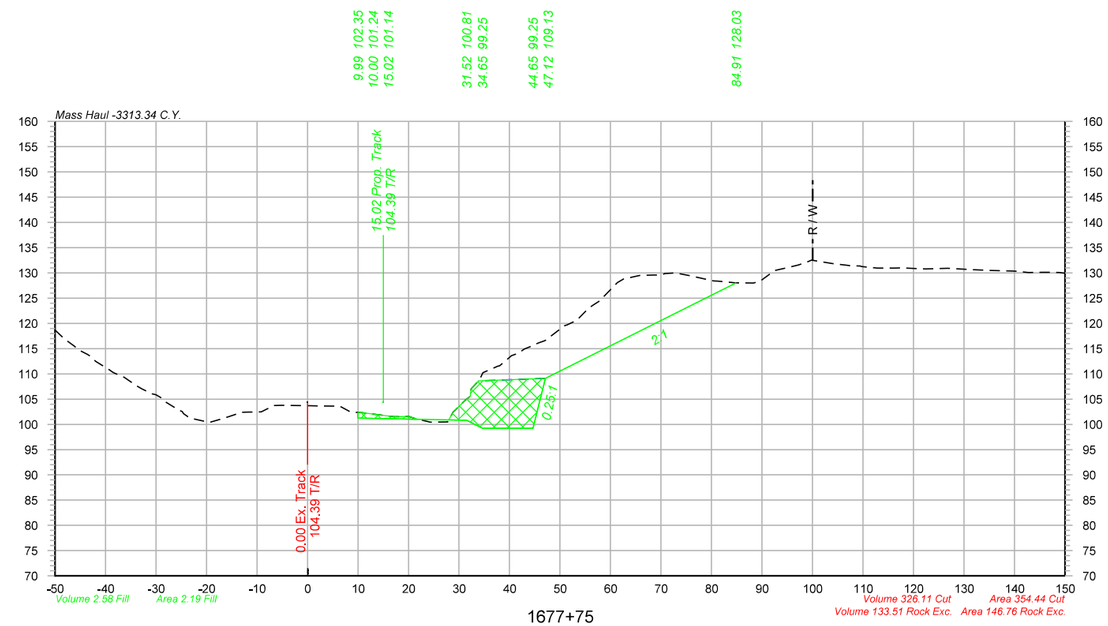
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 071 of 139	SHEET TITLE: CROSS SECTIONS STA.1674+00 TO STA.1676+50

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



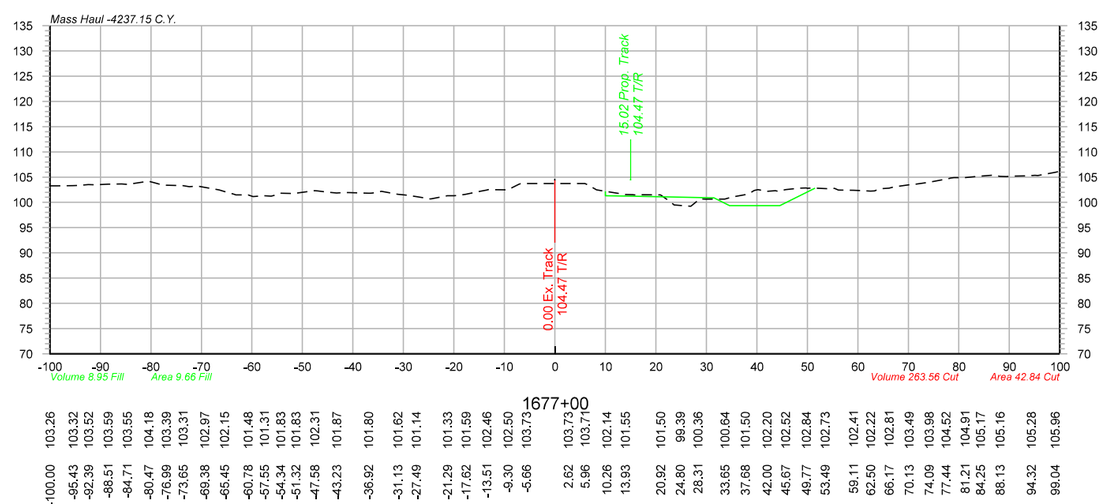
1677+25

-50.00	115.78	4.02	103.66
-45.66	115.59	8.18	102.51
-42.05	114.80	11.91	101.72
-39.00	113.97	16.71	101.50
-34.90	112.24	21.60	100.83
-31.73	109.80	25.39	99.51
-26.52	104.27	30.43	101.12
-21.41	101.19	33.58	105.41
-17.92	100.66	37.72	109.38
-13.85	102.14	41.15	112.79
-8.94	102.49	44.57	115.43
-3.59	103.69	47.76	117.11
		51.90	118.18
		54.96	117.72
		58.25	117.98
		63.40	118.38
		66.51	119.11
		72.03	120.56
		76.26	120.57
		82.16	120.33
		89.05	119.71
		94.10	120.74
		97.37	120.47
		100.64	121.39
		103.95	122.48
		107.23	123.08
		112.05	124.17
		116.12	124.16
		122.57	124.42
		127.39	124.27
		131.20	124.19
		134.64	123.94
		140.29	124.58
		144.97	123.59
		148.59	123.10



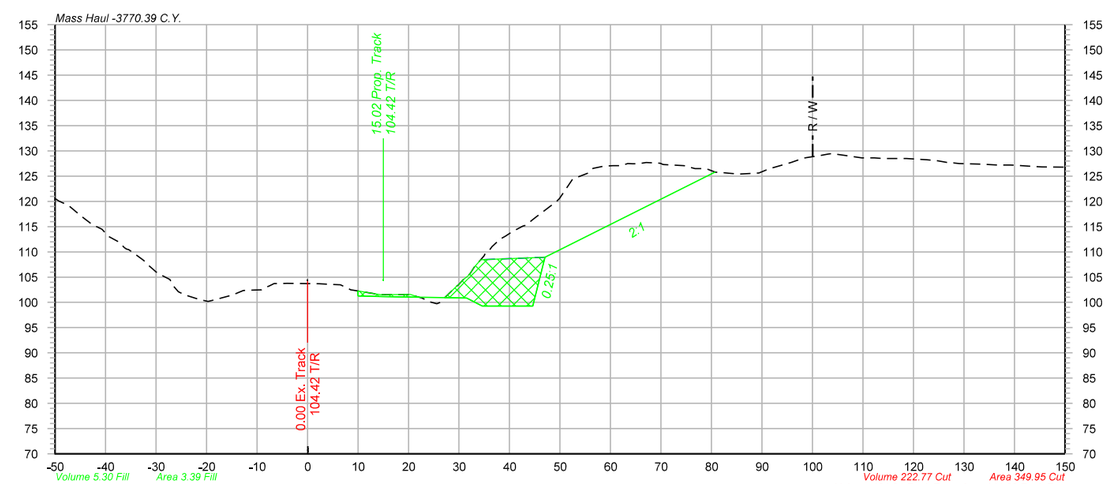
1677+75

-50.00	118.71	0.72	103.71
-46.16	115.50	6.38	103.62
-43.02	113.50	10.79	102.33
-38.99	110.64	16.72	101.55
-34.00	107.71	20.23	101.51
-30.85	106.05	24.32	100.44
-25.55	102.87	27.73	100.50
-19.82	100.48	31.27	104.83
-15.75	101.47	34.72	110.24
-11.37	102.46	38.06	111.63
-6.67	103.73	41.81	114.13
		45.68	116.09
		50.61	119.32
		55.62	122.93
		61.36	128.06
		65.80	129.50
		69.93	129.58
		75.69	129.44
		80.41	128.41
		84.71	128.04
		88.31	127.97
		91.92	130.02
		95.03	131.01
		99.18	132.25
		104.10	131.83
		107.29	131.44
		112.84	130.96
		116.30	130.96
		121.19	130.84
		126.80	130.92
		131.99	130.61
		139.62	130.38
		142.76	130.08
		147.18	130.14



1677+00

-100.00	103.26	10.26	102.14
-95.43	103.32	13.93	101.55
-92.39	103.52	20.92	101.50
-88.51	103.59	24.80	99.39
-84.71	103.55	28.31	100.36
-80.47	104.18	33.65	100.64
-76.99	103.39	37.68	101.50
-73.65	103.31	42.00	102.20
-69.38	102.97	45.67	102.52
-65.45	102.15	49.77	102.84
-60.78	101.48	53.49	102.73
-57.55	101.31	59.11	102.41
-54.34	101.83	62.50	102.22
-51.32	101.83	66.17	102.81
-47.58	102.31	70.13	103.49
-43.23	101.87	74.09	103.98
-36.92	101.80	77.44	104.52
-31.13	101.62	81.21	104.91
-27.49	101.14	84.25	105.17
-21.29	101.33	88.13	105.16
-17.62	101.59	94.32	105.28
-13.51	102.46	99.04	105.96
-9.30	102.50		
-5.66	103.73		
2.62	103.73		
5.96	103.71		



1677+50

-50.00	120.57	2.32	103.70
-45.00	117.24	6.53	103.48
-40.71	114.50	14.42	101.53
-37.32	111.93	19.85	101.56
-32.47	108.30	24.24	100.11
-27.25	104.51	29.61	103.25
-21.67	100.65	33.03	106.97
-14.79	101.48	36.54	111.03
-10.63	102.43	40.52	113.98
-7.52	103.29	44.34	116.20
-4.07	103.76	48.29	119.21
		52.46	124.33
		55.69	125.65
		58.73	126.97
		62.13	127.06
		65.50	127.46
		69.61	127.58
		74.57	127.08
		78.12	126.50
		82.20	125.70
		85.51	125.41
		89.24	125.60
		94.73	127.39
		98.24	128.57
		101.51	129.08
		104.55	129.38
		109.76	128.62
		113.86	128.48
		117.63	128.48
		122.66	128.24
		127.17	127.63
		132.17	127.39
		136.59	127.21
		140.17	127.14
		143.89	126.89
		149.65	126.79

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 072 of 139

UNION PACIFIC RAILROAD

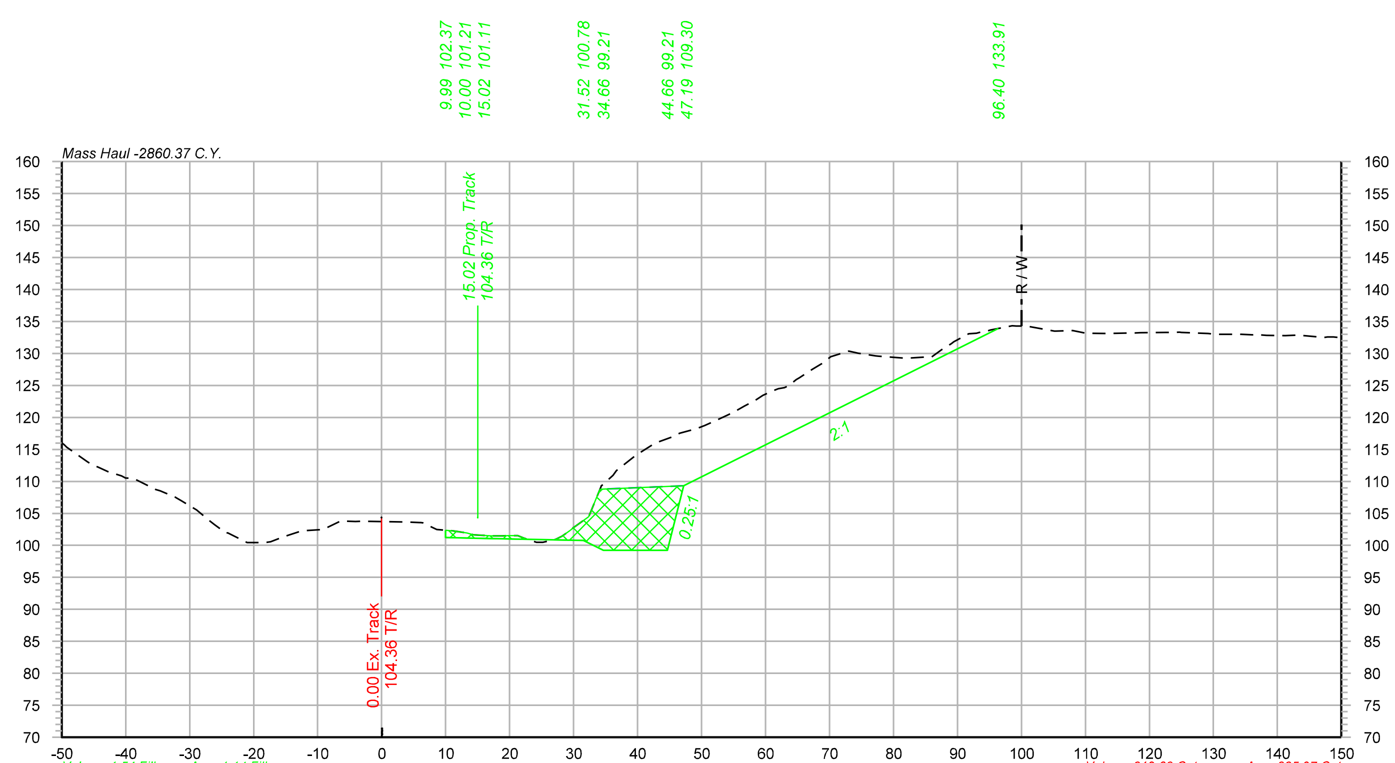
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1677+00 TO STA.1677+75

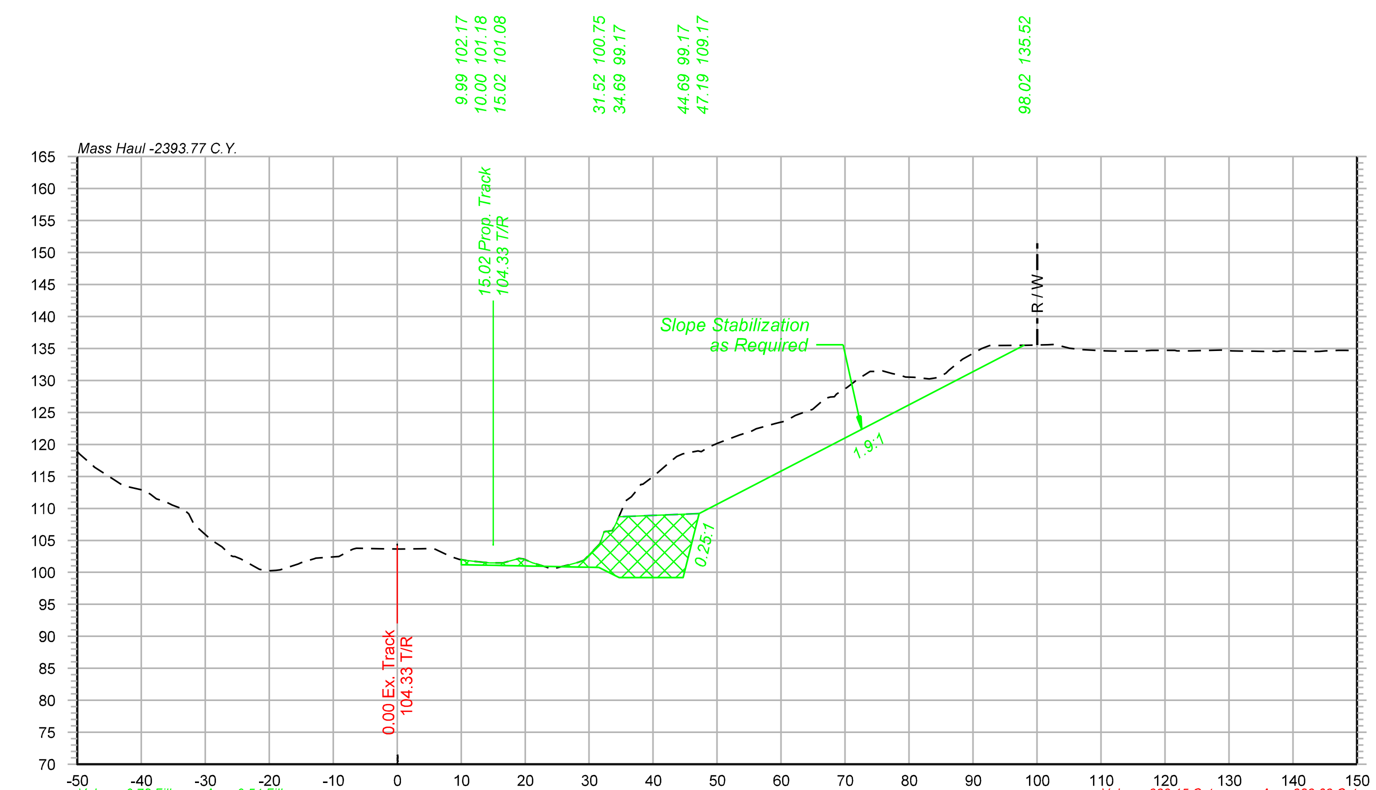
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha55773\parm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1678+00

116.02	-50.00
113.08	-46.00
111.53	-42.80
110.49	-38.92
108.73	-35.31
107.53	-32.25
105.51	-28.91
101.97	-24.41
100.52	-21.20
100.48	-17.92
101.60	-14.50
102.50	-9.16
103.73	-4.12
103.65	3.97
102.47	8.62
101.93	13.31
101.50	16.59
101.51	21.27
100.46	25.21
101.45	28.22
104.47	32.36
110.92	36.16
114.01	39.65
115.99	42.75
117.51	46.58
118.74	50.49
120.51	54.43
122.67	58.39
124.50	61.99
126.22	65.29
128.41	68.78
130.35	72.99
129.59	77.20
129.29	81.47
129.48	85.82
131.53	89.03
133.15	92.97
134.31	98.54
133.50	105.14
133.38	109.07
133.13	113.44
133.21	117.08
133.30	122.58
133.10	129.18
132.98	134.35
132.82	138.30
132.81	142.21
132.53	146.89
132.45	150.00



1678+25

118.88	-50.00
114.48	-44.24
112.81	-39.59
111.05	-36.24
109.40	-32.88
105.04	-29.02
102.62	-25.93
100.49	-21.53
100.39	-18.30
101.50	-14.98
102.50	-9.12
103.70	-2.75
103.64	0.51
103.68	3.72
102.83	7.55
101.71	11.97
101.49	15.11
102.08	18.65
100.84	23.25
101.54	28.26
104.40	31.59
111.20	35.71
115.01	40.08
118.13	43.69
118.97	47.01
120.18	50.11
121.51	53.66
123.27	59.14
124.55	62.23
127.20	66.90
128.90	70.31
131.39	73.91
131.06	77.35
130.51	80.81
130.46	84.48
133.34	88.36
134.99	91.38
135.50	98.04
135.58	101.70
135.03	105.08
134.61	110.72
134.58	116.08
134.71	121.54
134.76	128.69
134.56	132.65
134.57	137.02
134.54	142.35
134.68	147.11

Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

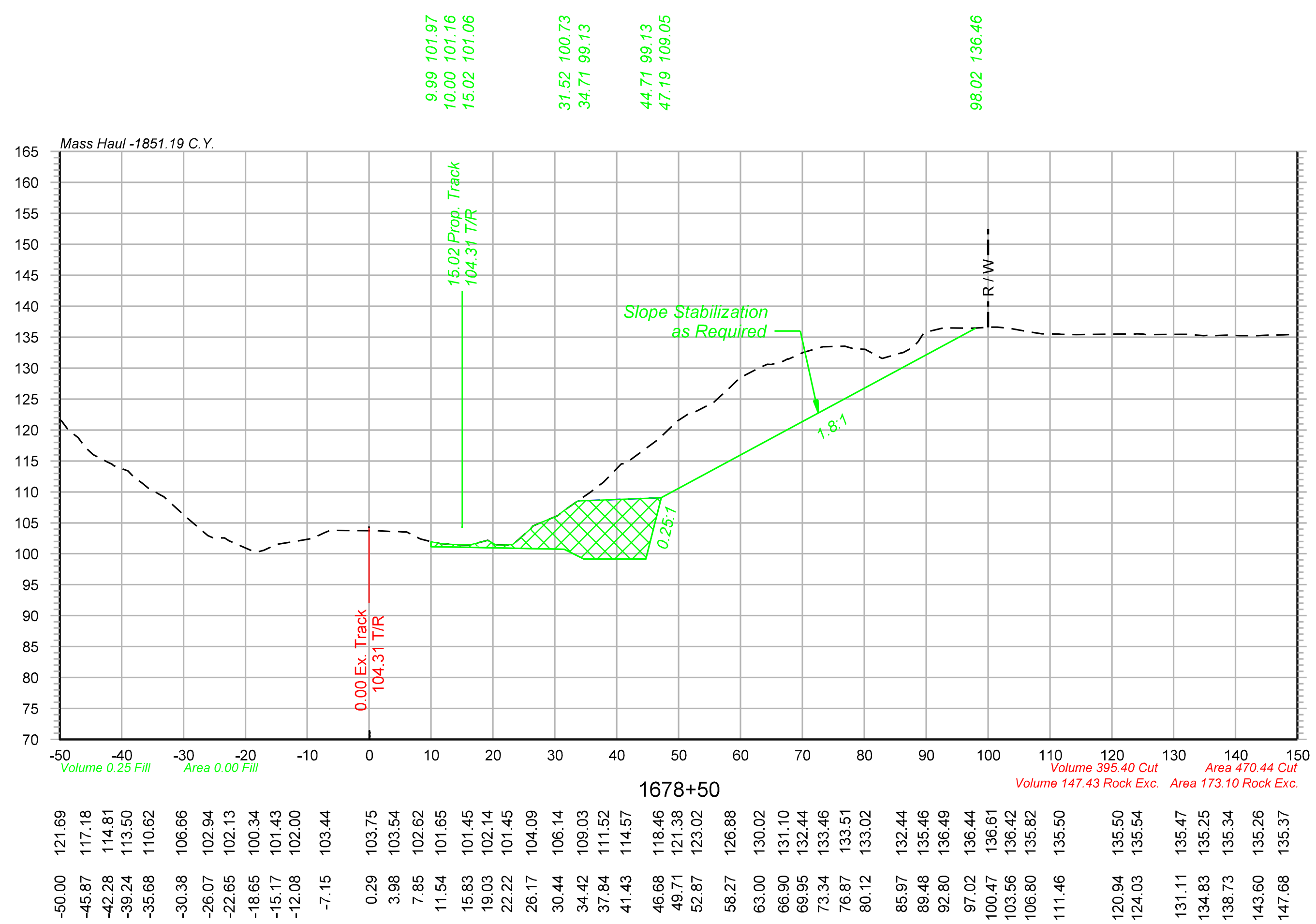
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 073 of 139

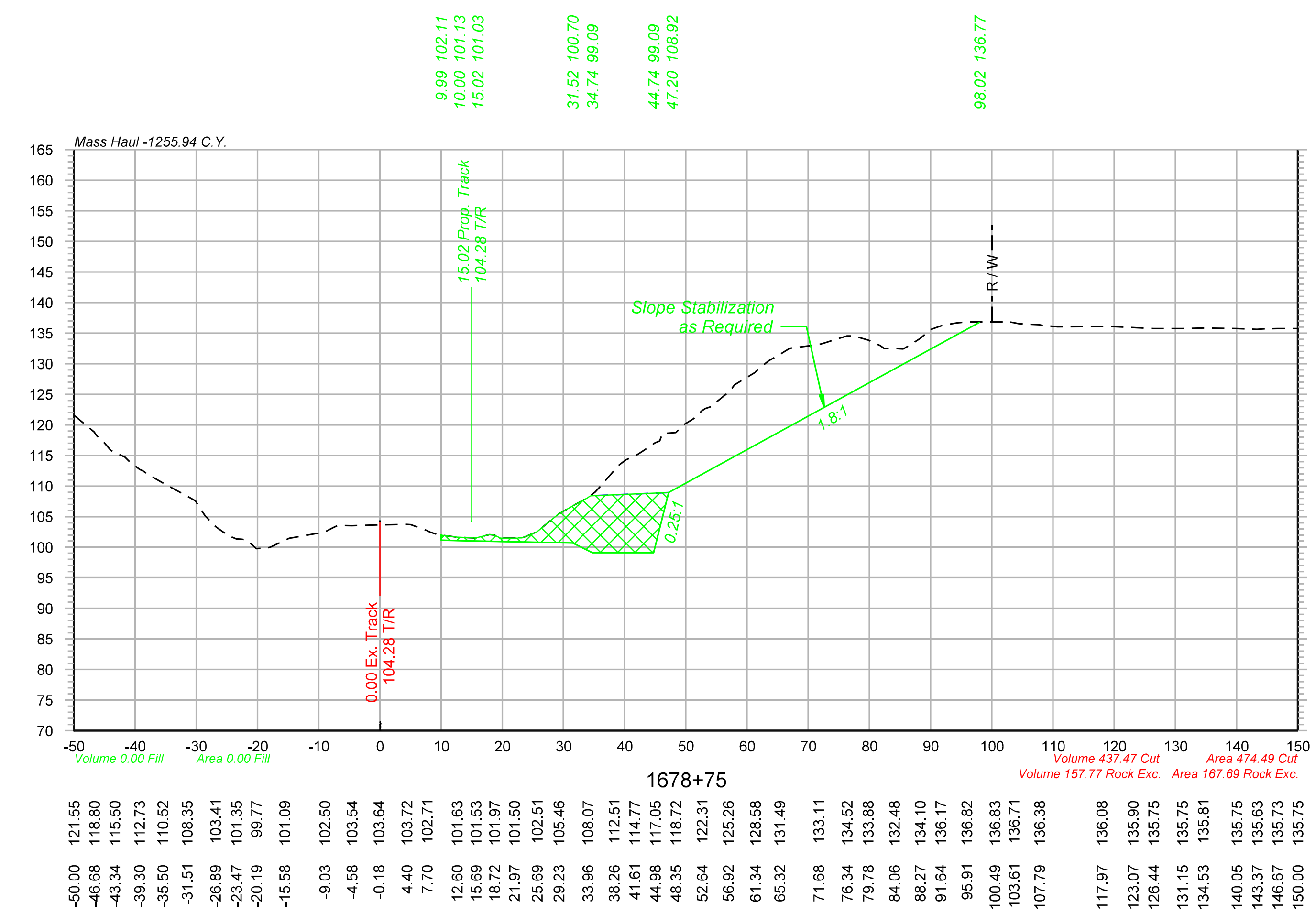
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1678+00 TO STA.1678+25





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

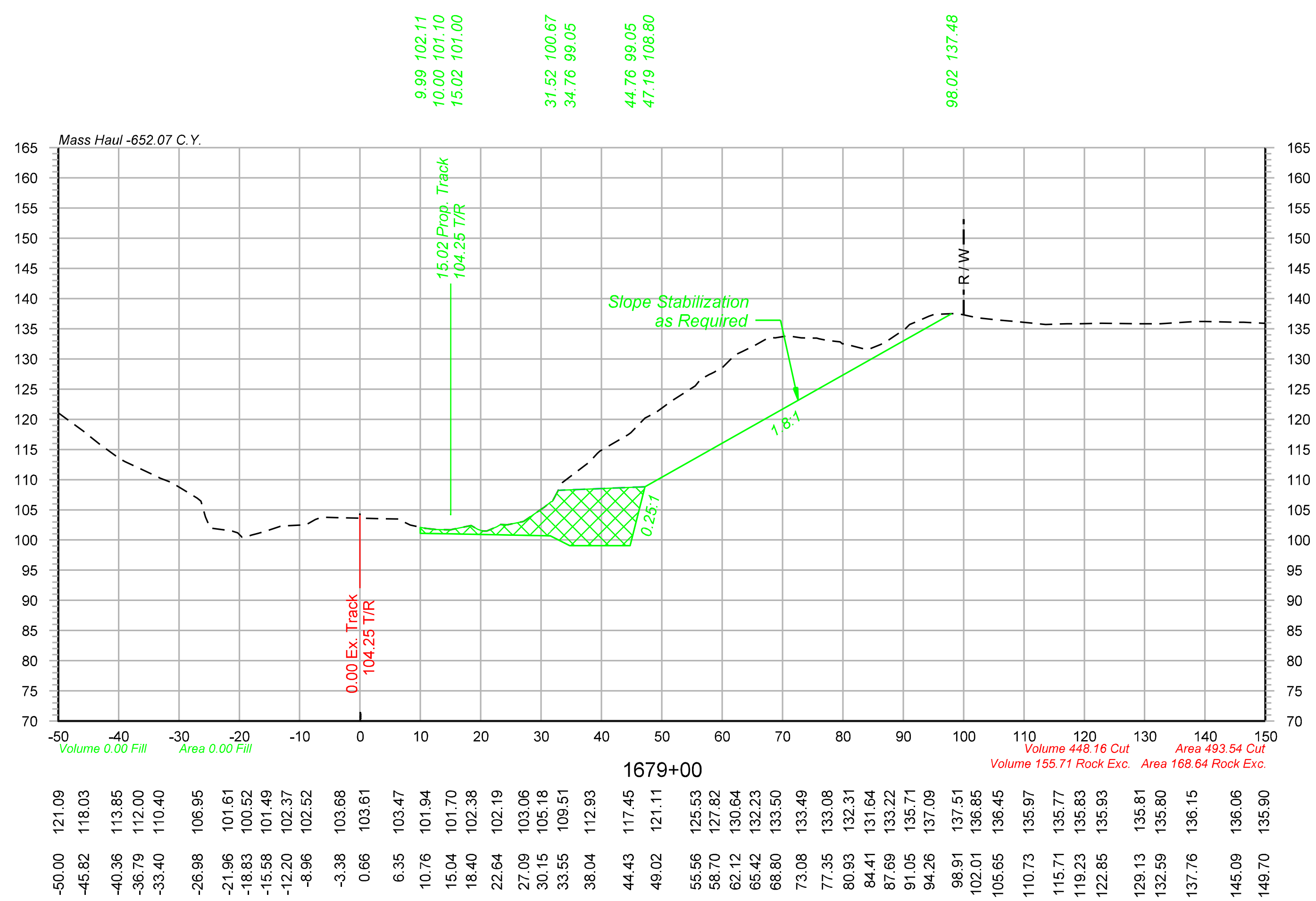
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 074 of 139

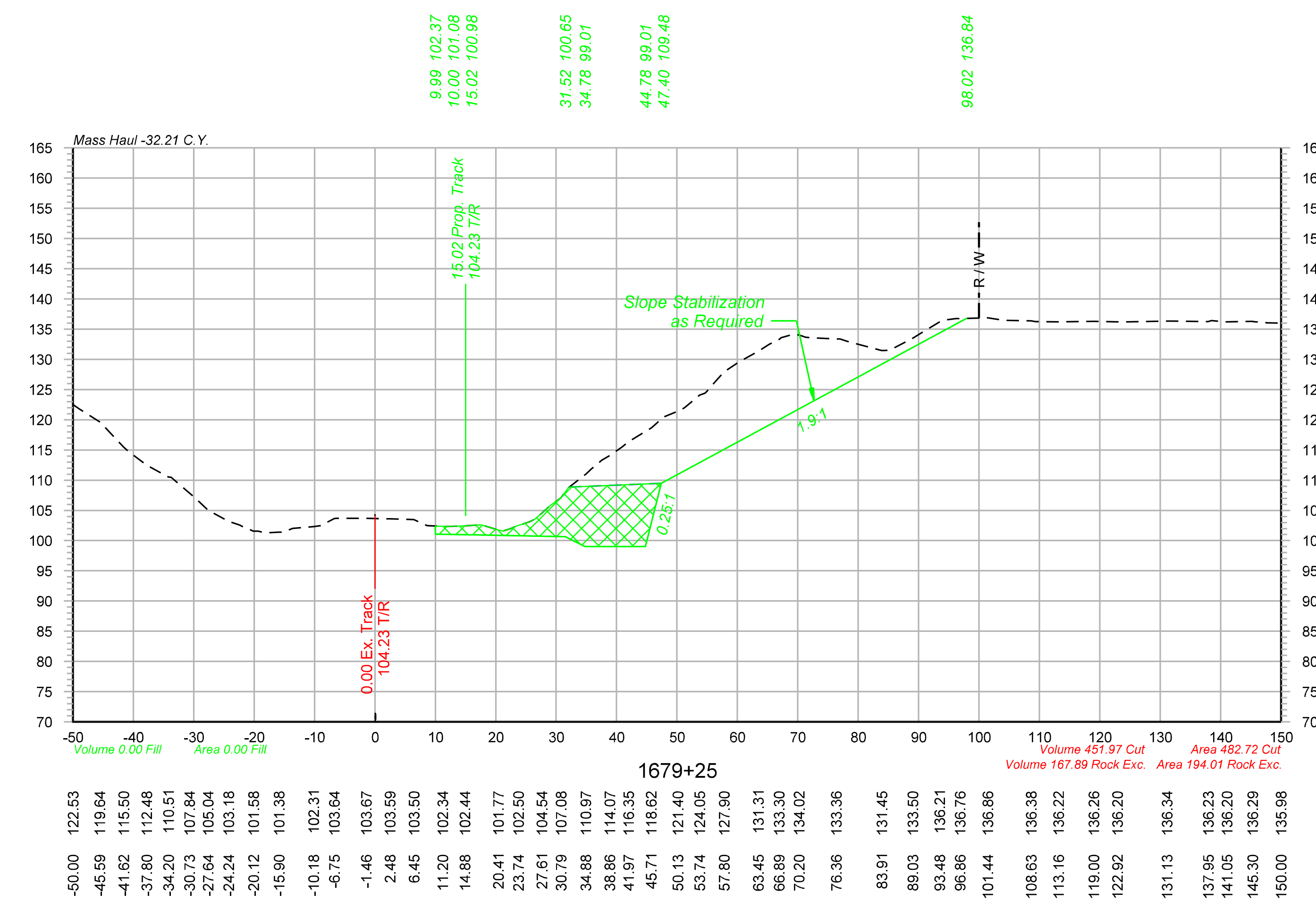
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1678+50 TO STA.1678+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 075 of 139

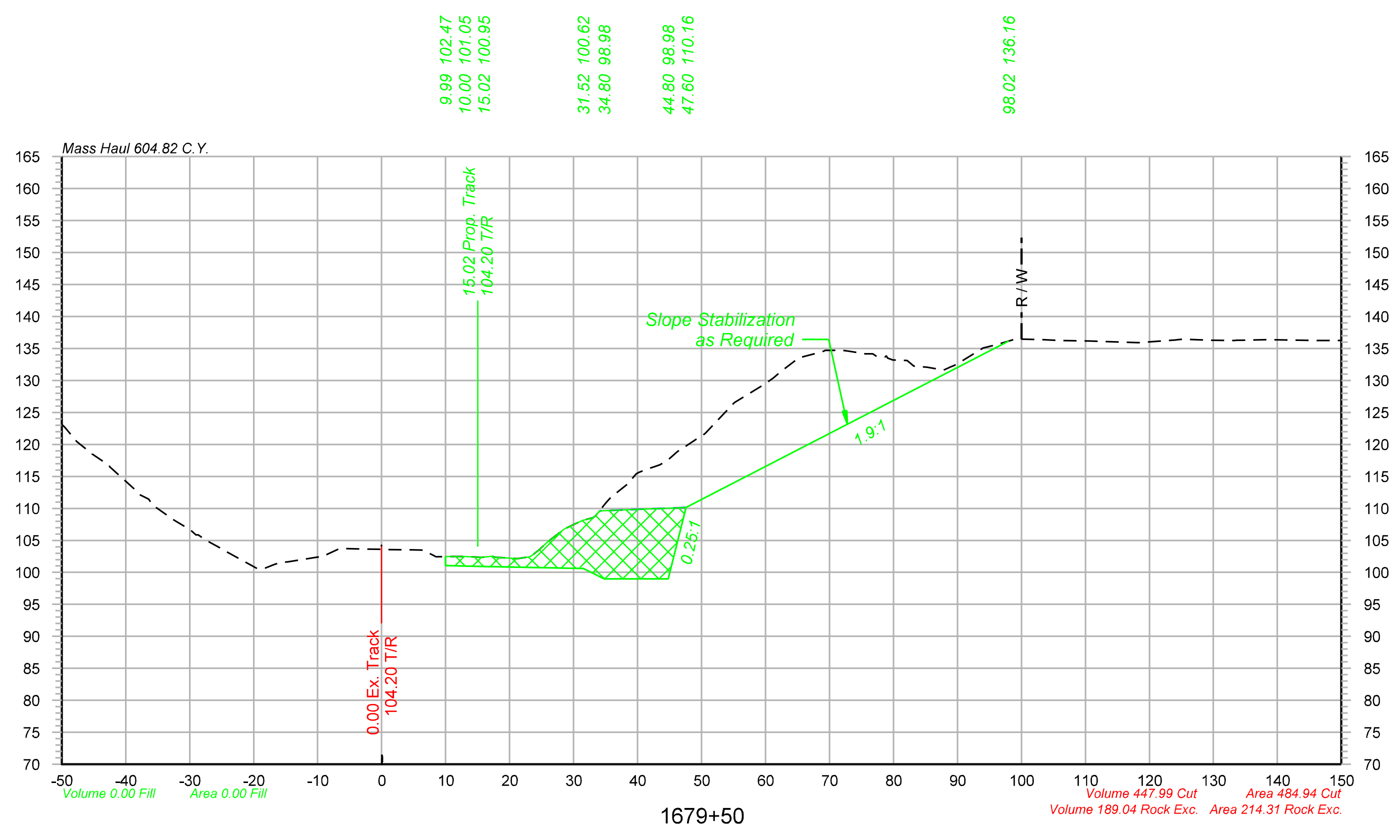
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

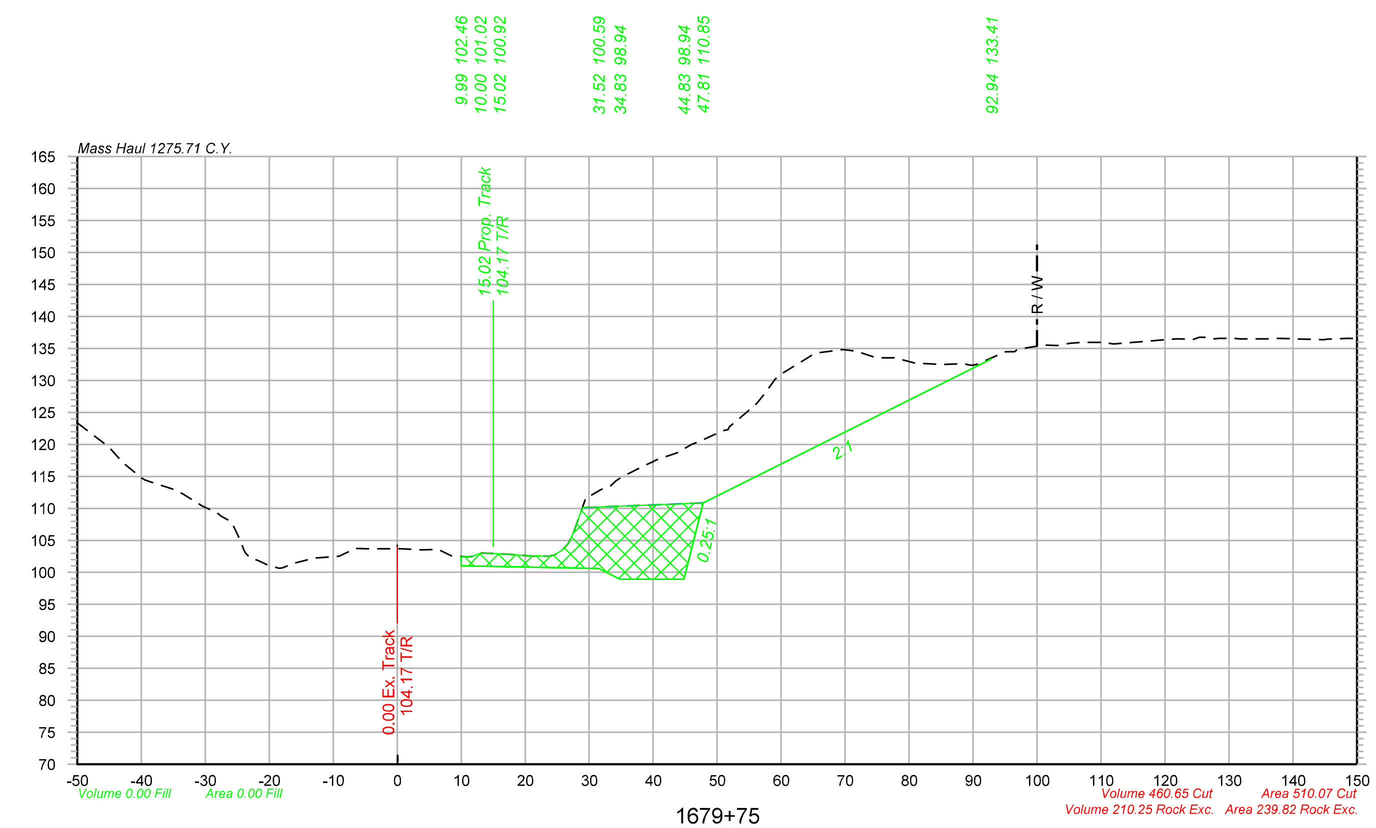
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1679+00 TO STA.1679+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



Offset	Elevation
-50.00	123.10
-45.97	119.09
-42.57	116.70
-38.60	112.97
-32.50	108.17
-29.02	105.84
-25.33	103.84
-19.78	100.75
-16.21	101.44
-9.42	102.48
-6.35	103.75
-2.96	103.65
0.13	103.60
4.16	103.50
8.11	102.64
11.21	102.49
15.70	102.34
21.24	102.13
24.61	103.51
28.61	106.79
33.08	108.58
36.19	112.04
39.77	115.40
43.48	116.83
47.05	119.49
50.50	121.65
55.13	126.52
59.85	129.42
65.20	133.53
68.43	134.37
72.04	134.71
75.61	134.16
78.64	133.66
82.15	133.12
85.22	132.08
88.91	132.11
94.02	135.09
98.74	136.38
103.46	136.35
110.79	136.15
118.14	135.90
124.13	136.34
127.29	136.36
133.22	136.23
138.25	136.38
146.21	136.24
150.00	136.24



Offset	Elevation
-50.00	123.38
-45.27	119.75
-39.93	114.73
-34.84	112.96
-30.72	110.51
-27.49	108.78
-24.47	104.87
-20.42	101.21
-16.69	101.17
-12.98	102.24
-9.06	102.51
-4.77	103.69
0.47	103.67
3.59	103.52
6.64	103.47
10.17	102.48
13.55	103.04
17.62	102.81
21.39	102.53
24.74	102.79
29.56	111.86
33.34	113.51
38.23	116.48
43.77	118.68
47.47	120.56
50.84	122.10
53.87	124.40
57.60	128.15
63.49	133.13
69.63	134.84
74.77	133.58
77.94	133.49
80.94	132.70
85.13	132.50
88.53	132.60
95.00	134.43
101.10	135.53
105.35	135.81
110.32	135.93
115.56	135.99
119.54	136.30
124.08	136.39
127.22	136.55
130.83	136.57
135.88	136.50
139.78	136.52
144.82	136.35
148.66	136.56

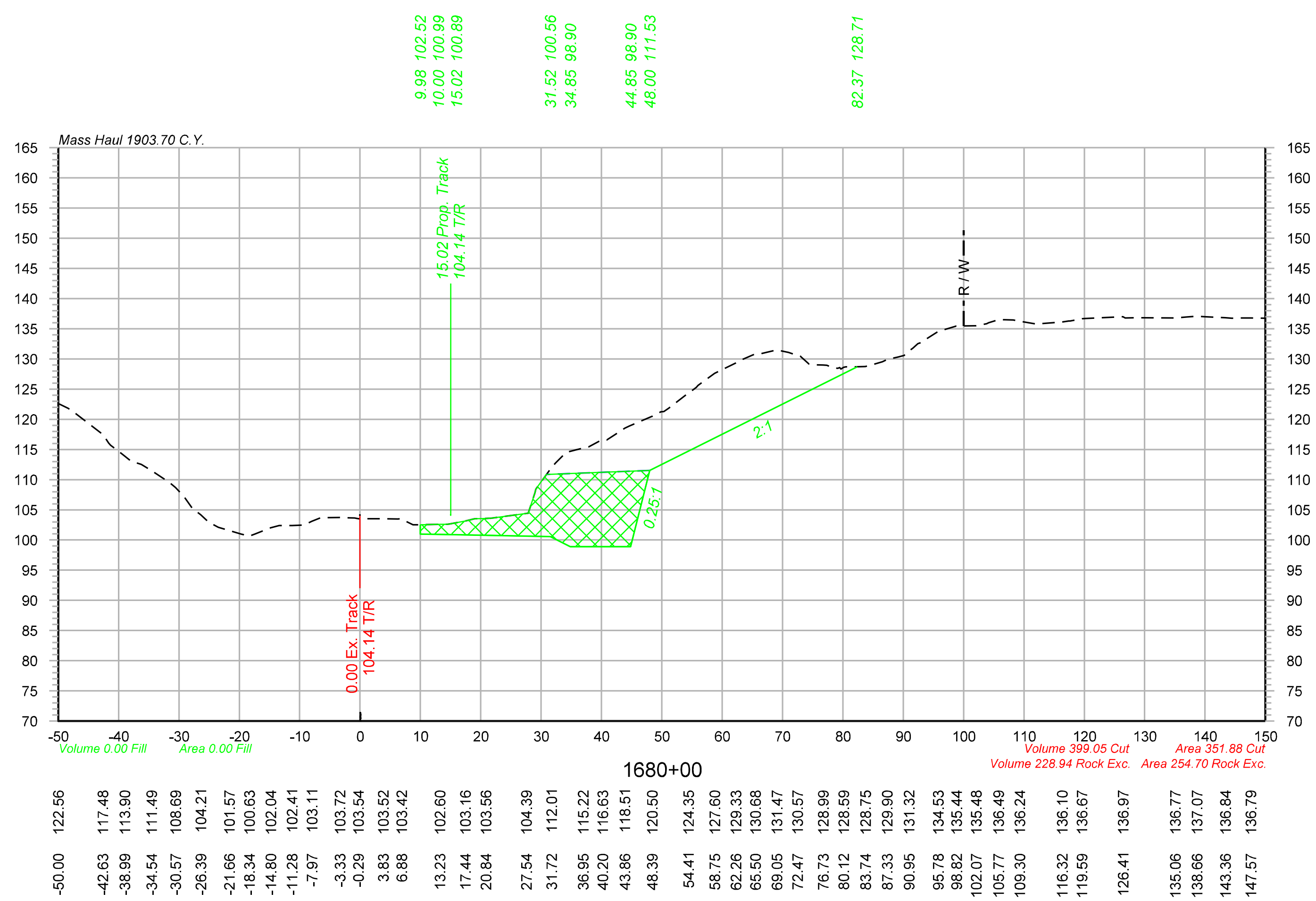
Legend

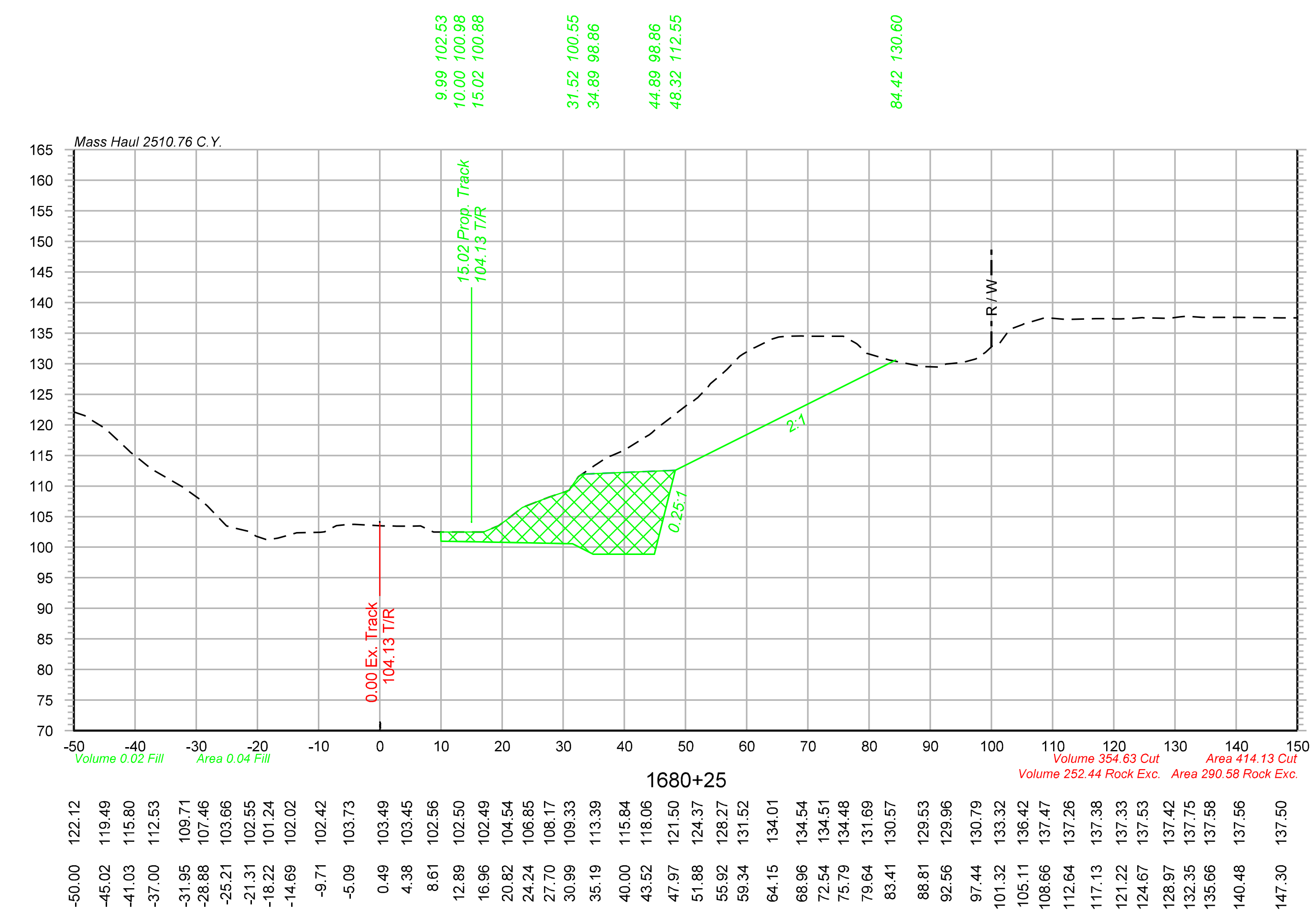
Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 076 of 139	SHEET TITLE: CROSS SECTIONS STA.1679+50 TO STA.1679+75





Legend

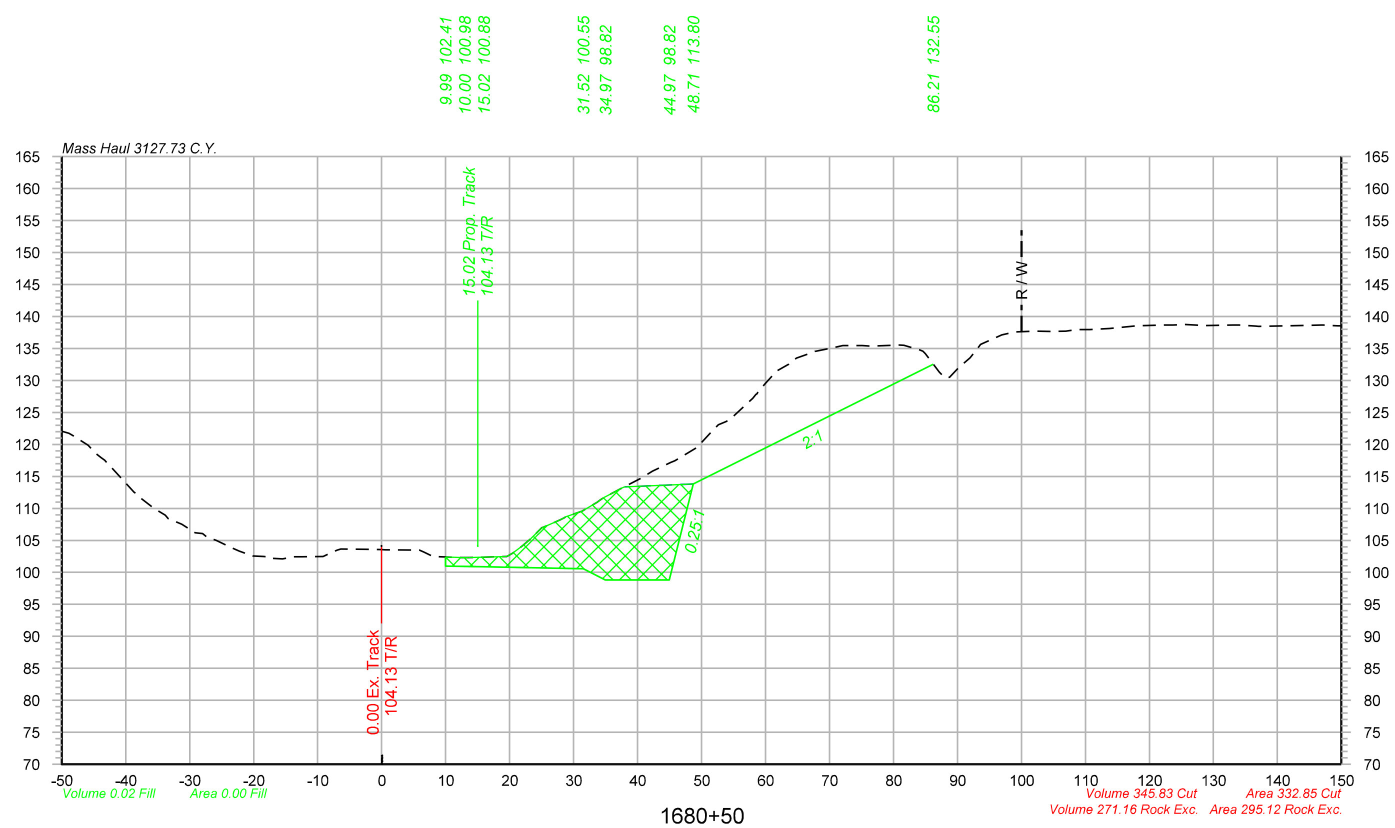
Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

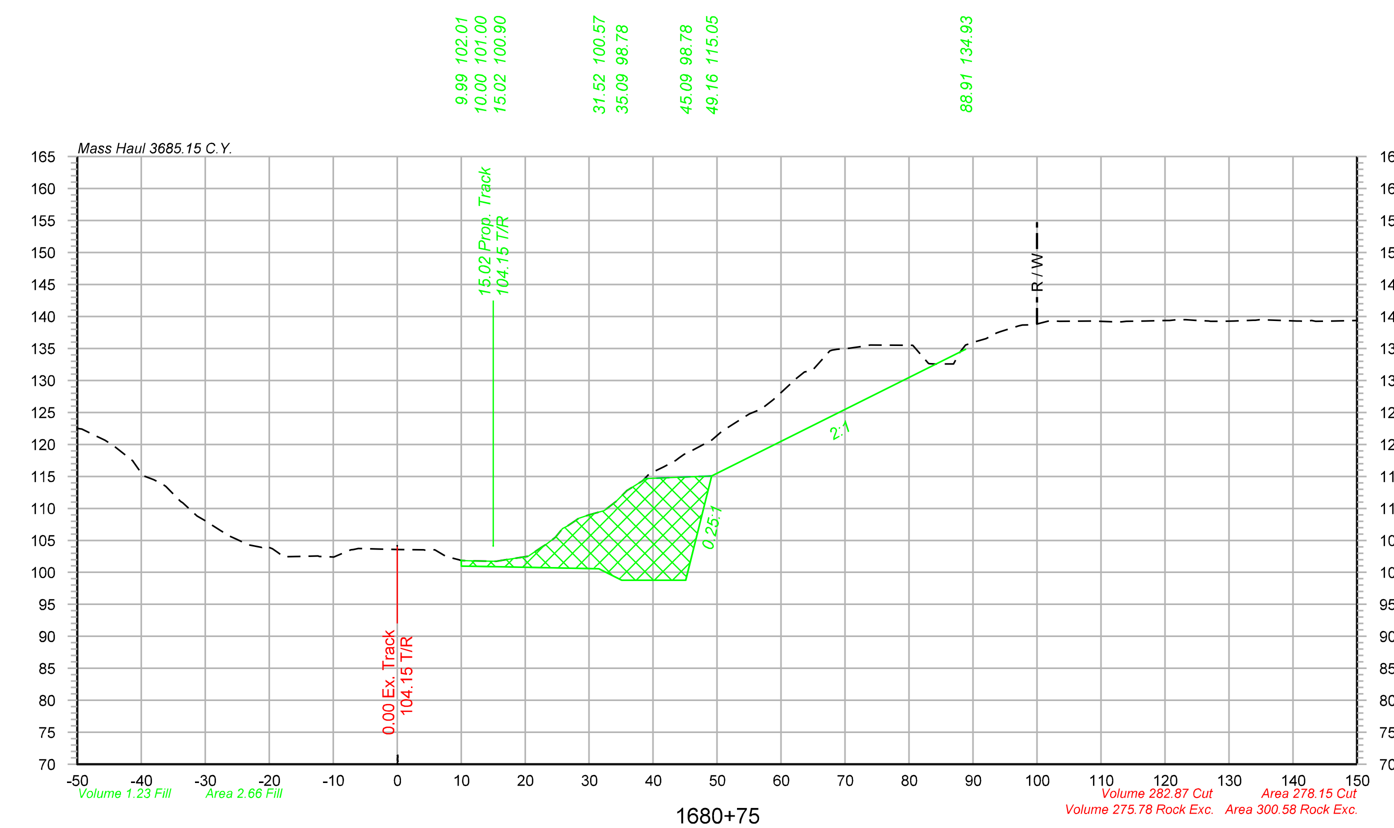
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 077 of 139	SHEET TITLE: CROSS SECTIONS STA.1680+00 TO STA.1680+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1680+50

Offset	Elevation
-50.00	122.07
-45.88	119.86
-42.66	116.85
-39.12	112.99
-35.62	110.01
-31.24	107.51
-27.97	106.08
-24.86	104.52
-20.14	102.58
-15.49	102.10
-9.15	102.48
-2.44	103.62
5.82	103.50
11.40	102.34
19.58	102.46
23.30	105.25
27.87	108.20
31.34	109.56
34.67	111.65
40.58	114.74
45.19	117.18
49.31	119.54
52.62	123.07
57.09	126.36
61.71	131.44
64.82	133.49
70.37	135.08
75.13	135.46
80.94	135.54
84.07	134.78
87.17	131.30
90.17	131.99
93.41	135.31
96.95	137.12
100.98	137.66
104.42	137.64
108.64	137.93
113.78	138.11
117.57	138.51
122.27	138.64
125.61	138.74
128.67	138.58
133.06	138.66
136.67	138.47
141.46	138.55
145.28	138.64
149.51	138.52



1680+75

Offset	Elevation
-50.00	122.51
-45.69	120.63
-41.30	117.39
-38.06	114.48
-33.85	111.12
-30.22	108.20
-26.23	105.68
-21.18	103.89
-17.80	102.45
-12.38	102.55
-7.66	103.33
-3.01	103.65
0.46	103.56
4.16	103.50
7.21	102.73
11.16	101.82
15.49	101.71
20.51	102.51
24.71	105.48
27.88	108.12
32.34	109.66
35.90	112.76
39.42	115.39
43.52	117.49
49.21	120.69
54.32	124.34
58.80	126.97
62.41	130.32
67.60	134.61
70.64	135.04
73.67	135.50
80.57	135.50
84.59	132.53
87.92	134.36
92.05	136.54
97.16	138.53
101.96	139.31
108.69	139.27
112.09	139.16
116.89	139.29
120.04	139.35
123.25	139.50
126.87	139.27
130.81	139.30
134.12	139.42
140.61	139.29
146.35	139.29
150.00	139.37

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

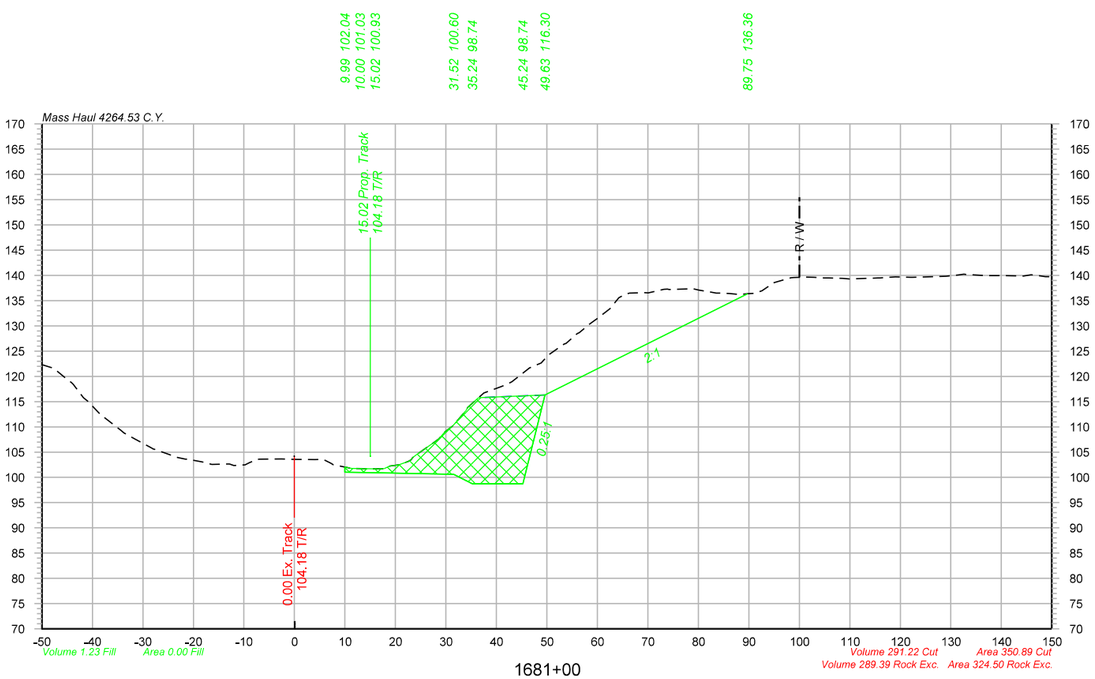
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 078 of 139

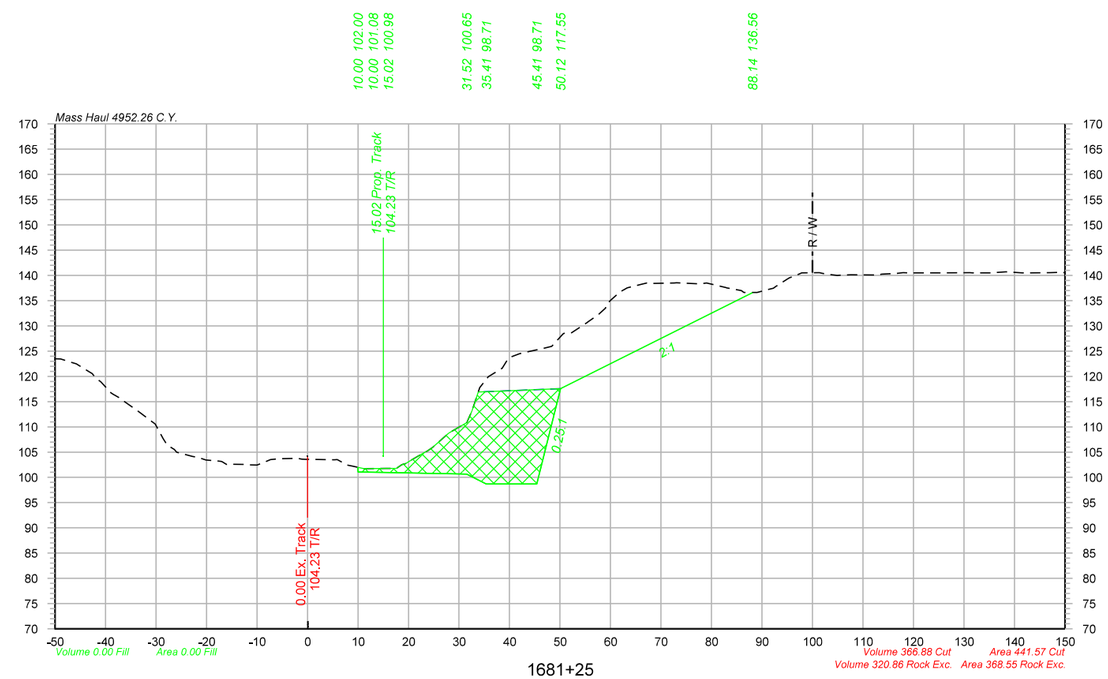
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1680+50 TO STA.1680+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 079 of 139

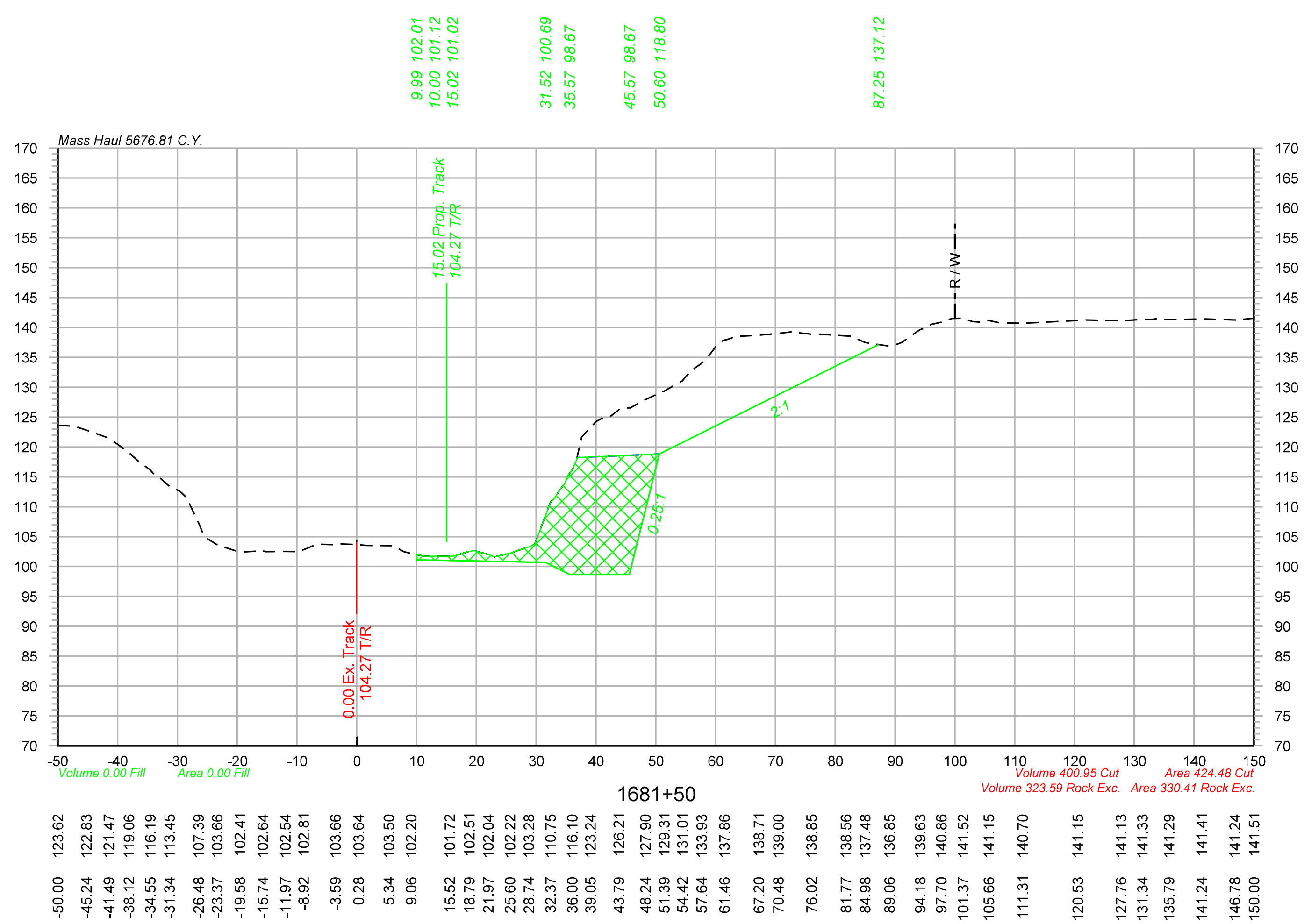
UNION PACIFIC RAILROAD

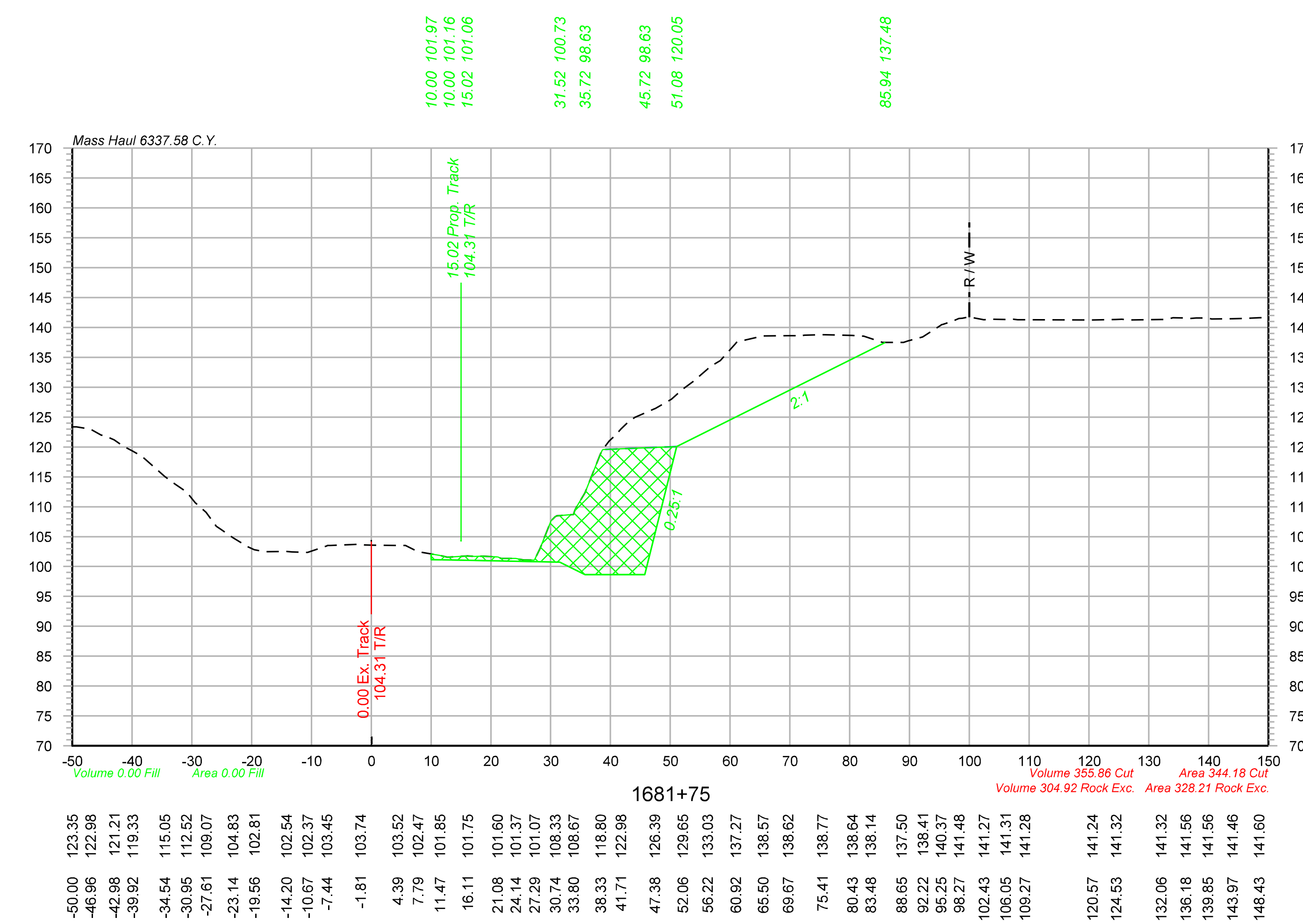
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1681+00 TO STA.1681+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 080 of 139

UNION PACIFIC RAILROAD

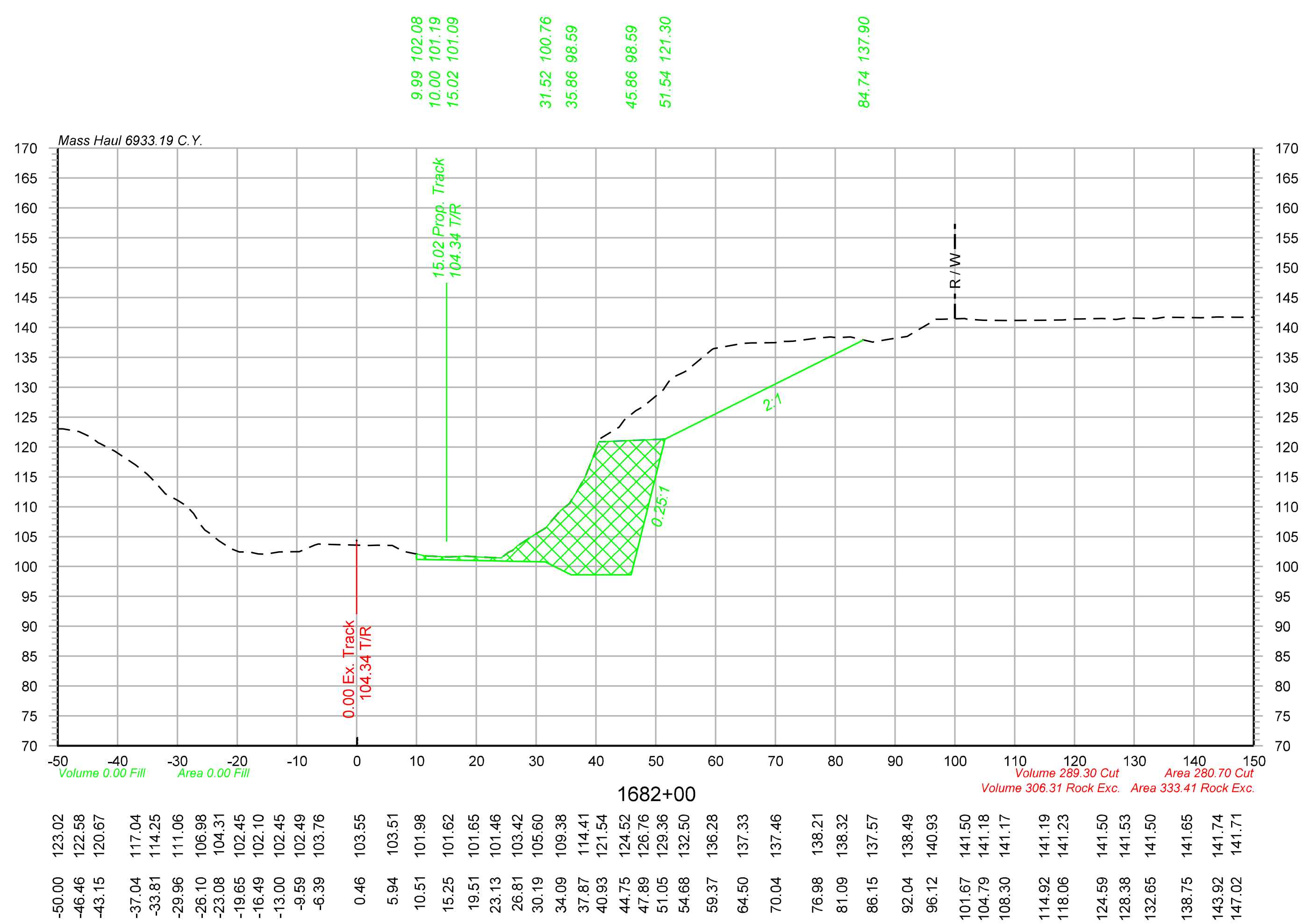
Office of Assistant Vice President
Engineering Design/Construction

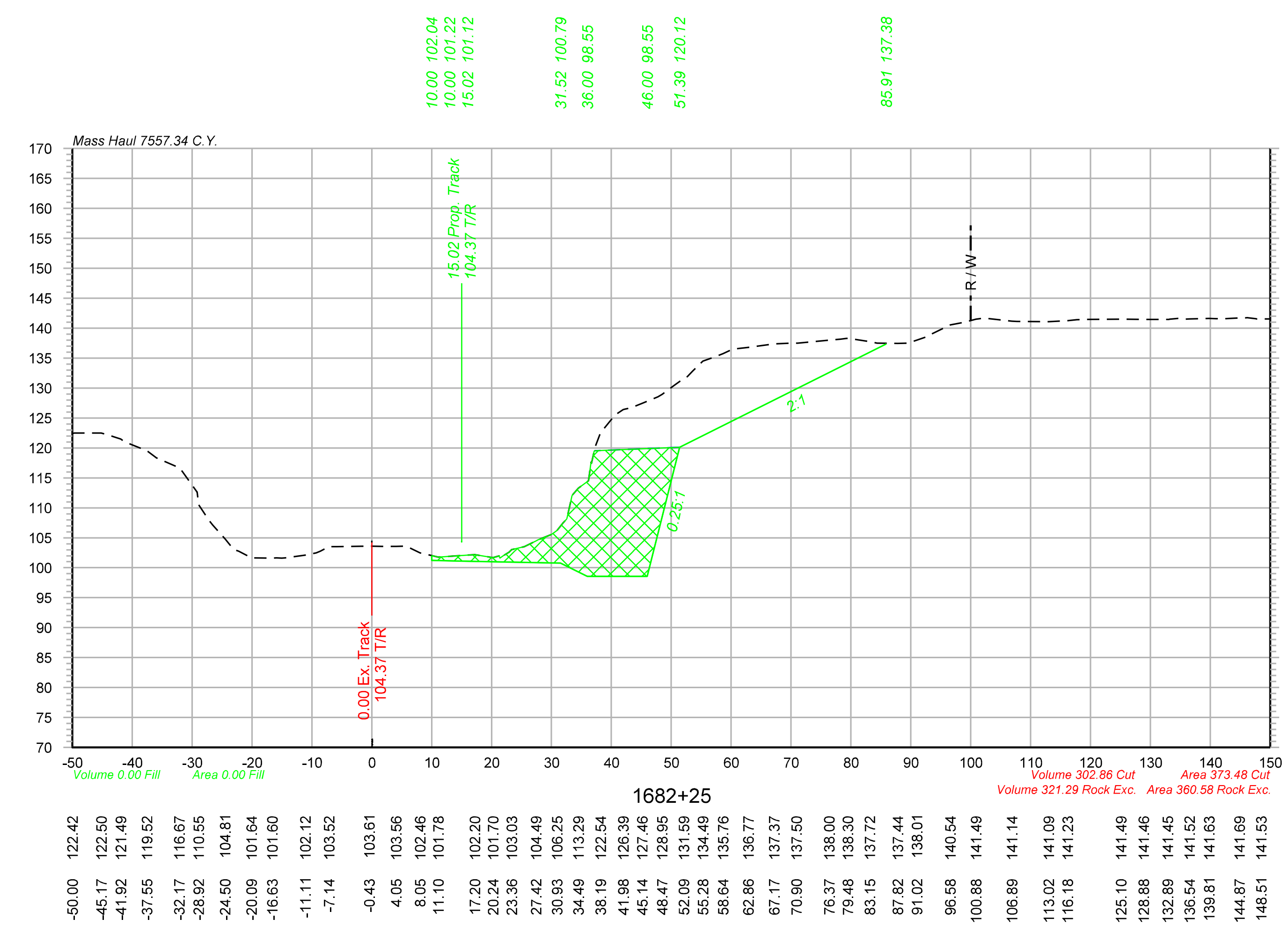
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1681+50 TO STA.1681+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

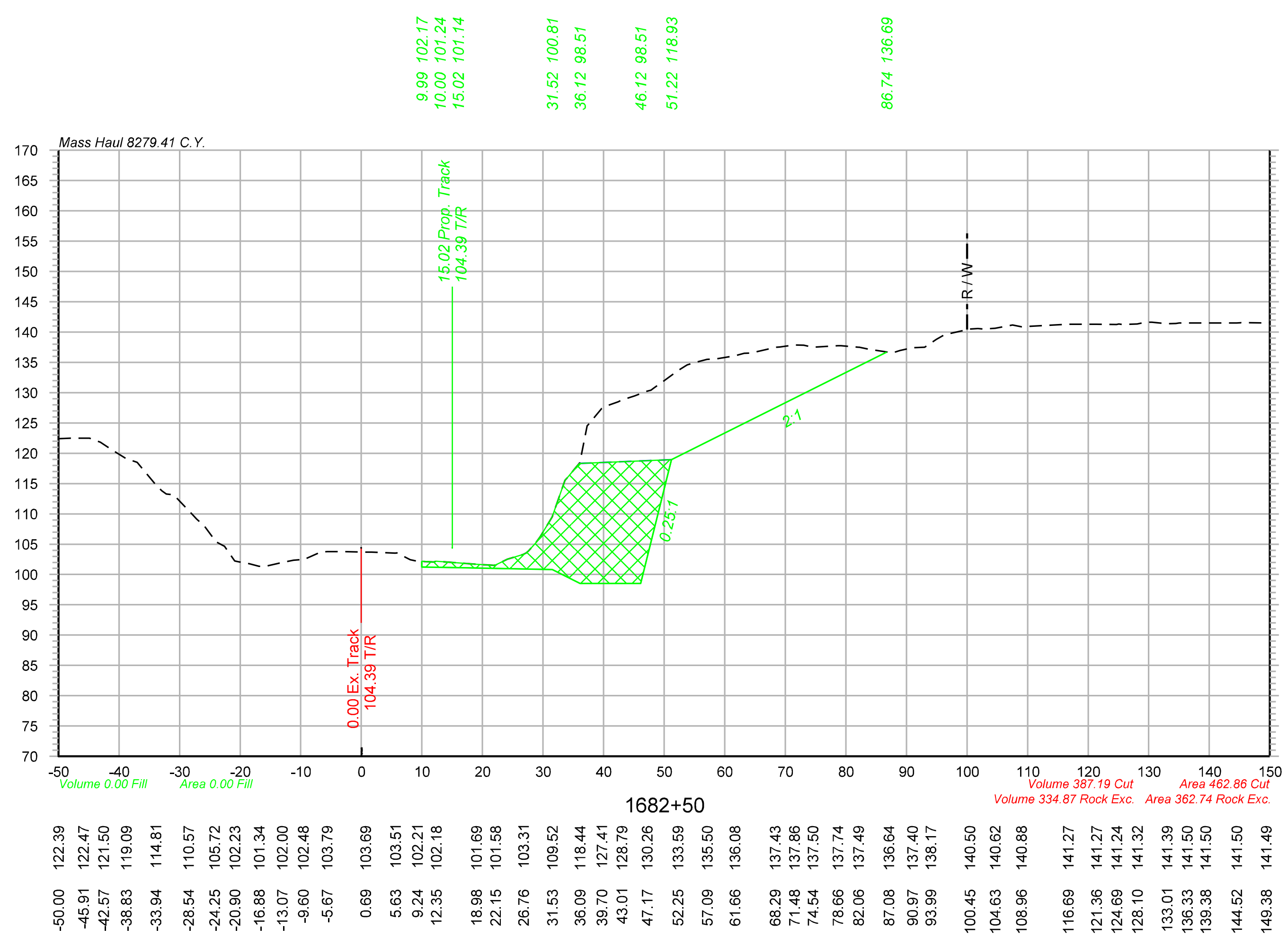
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 081 of 139

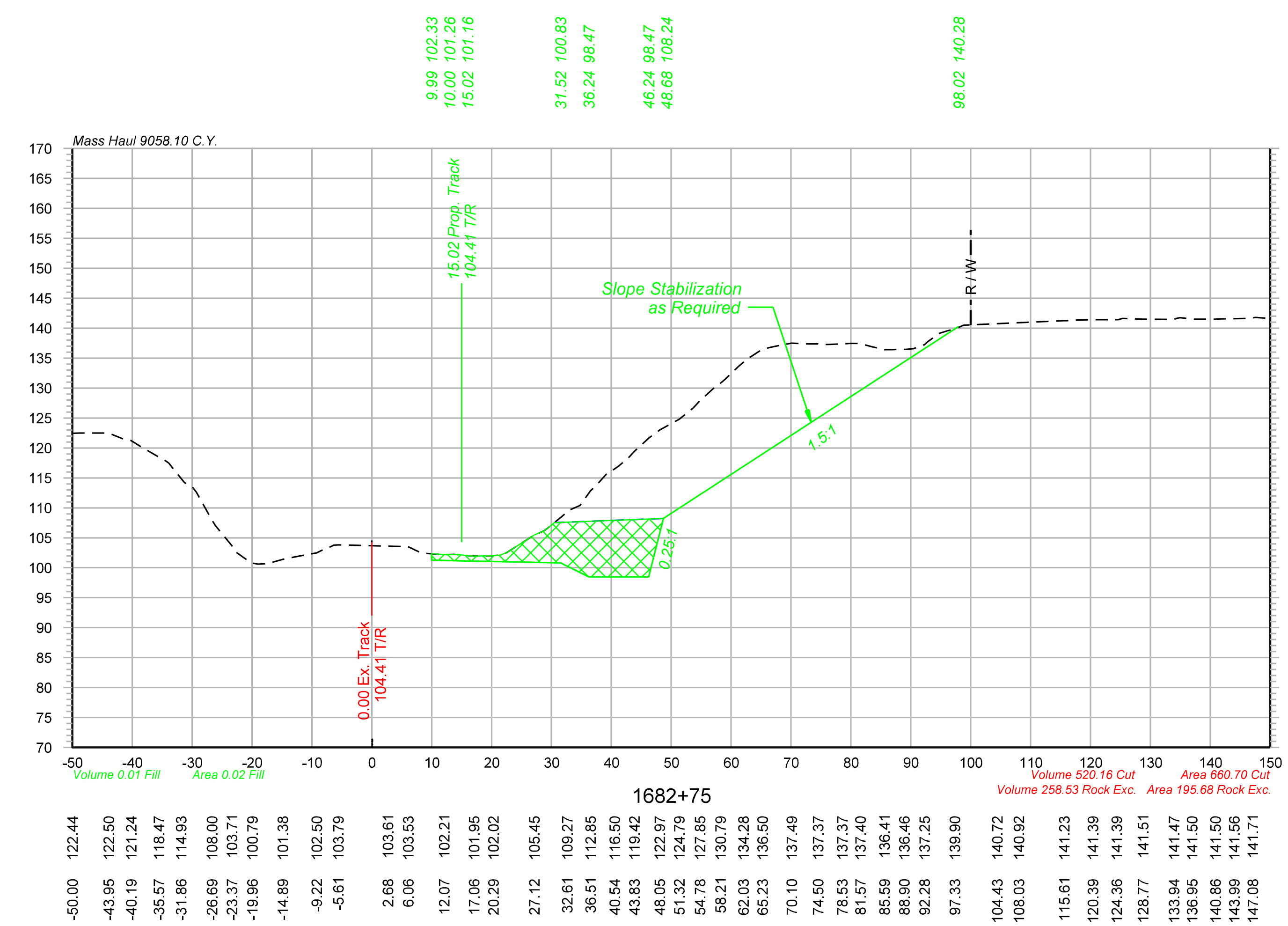
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1682+00 TO STA.1682+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

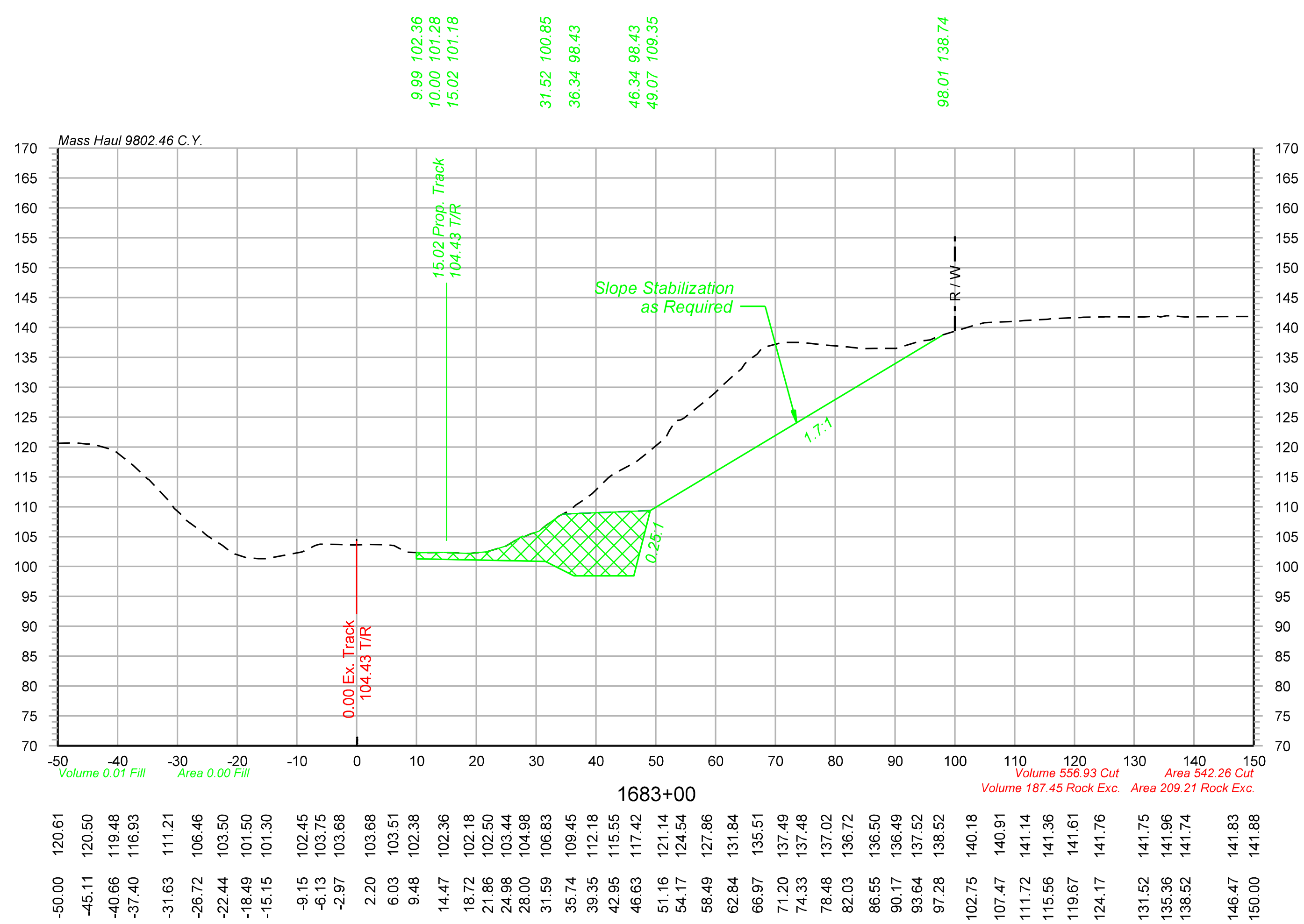
Assumed Rock Excavation

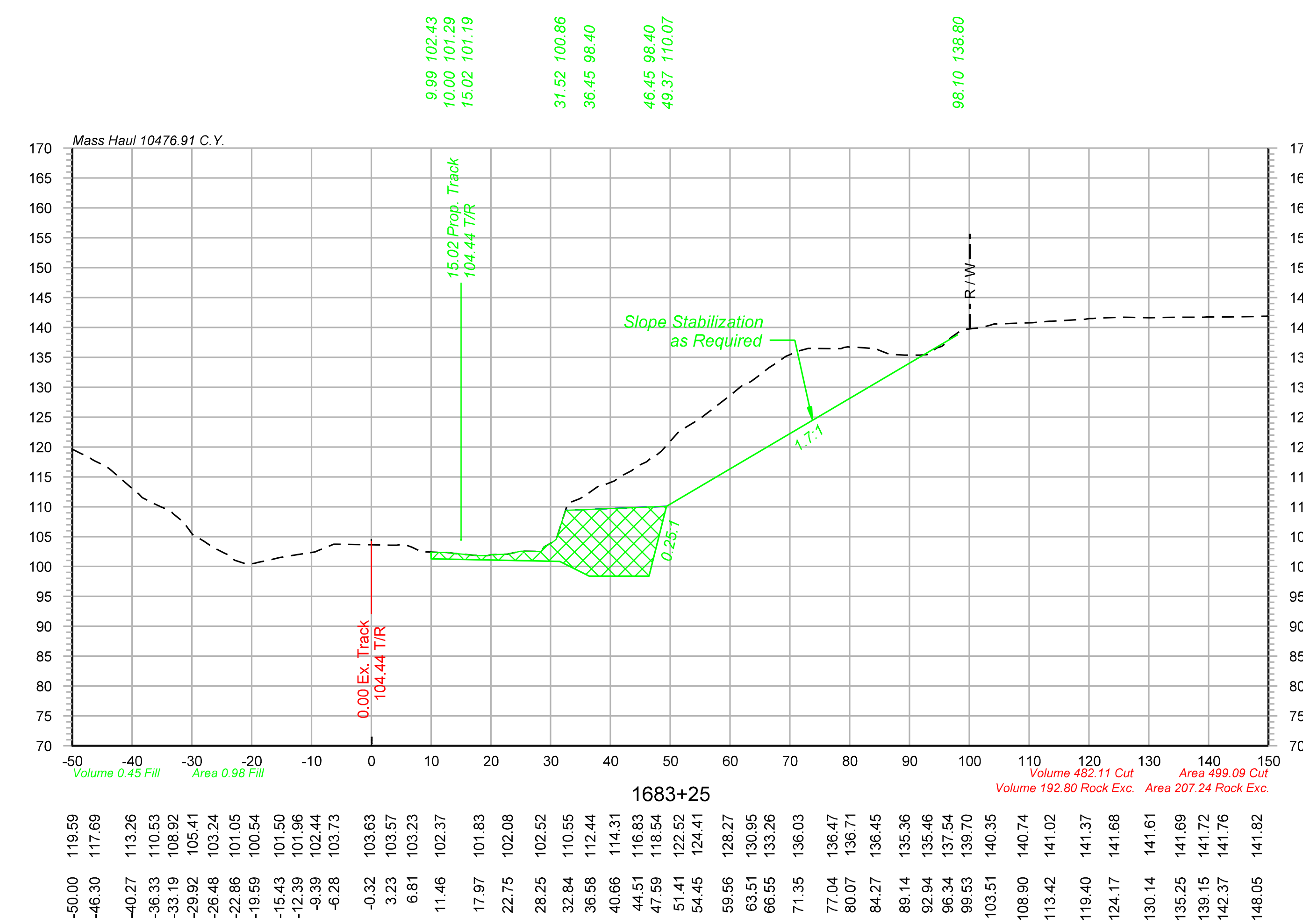
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 082 of 139	SHEET TITLE: CROSS SECTIONS STA.1682+50 TO STA.1682+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

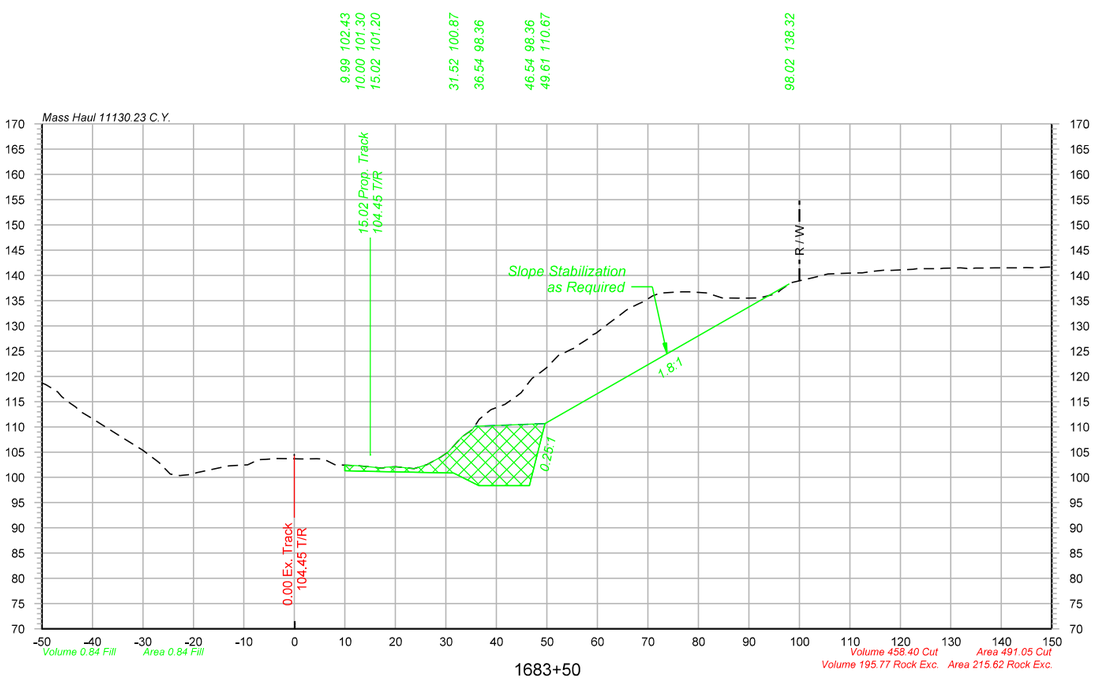
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 083 of 139

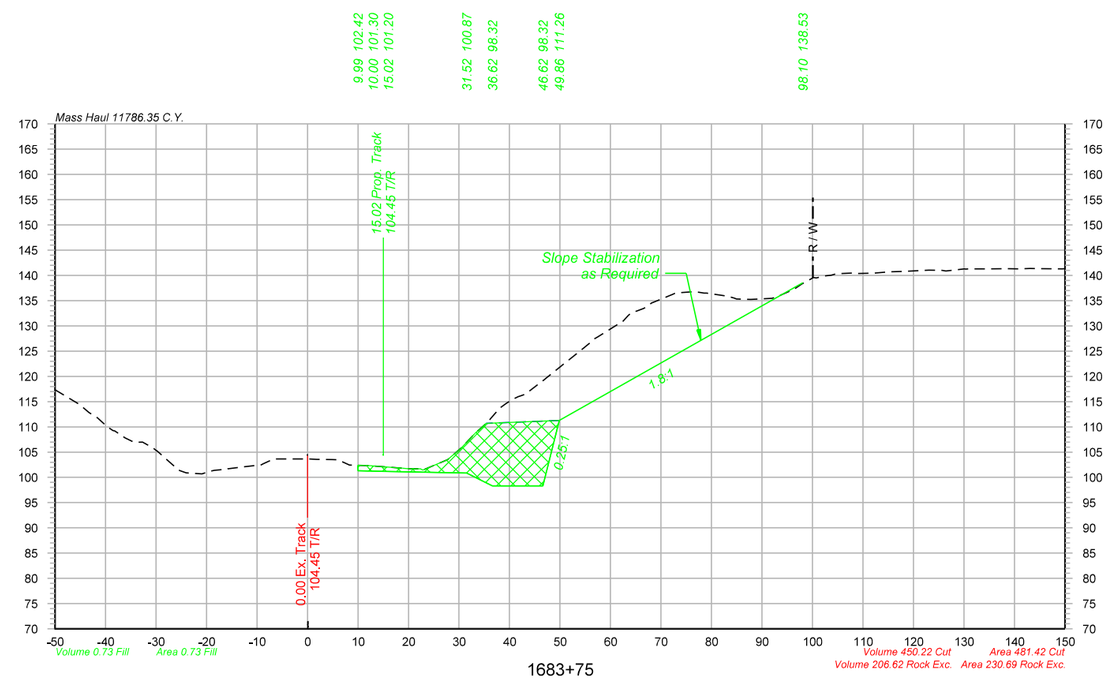
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1683+00 TO STA.1683+25





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3910
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 084 of 139

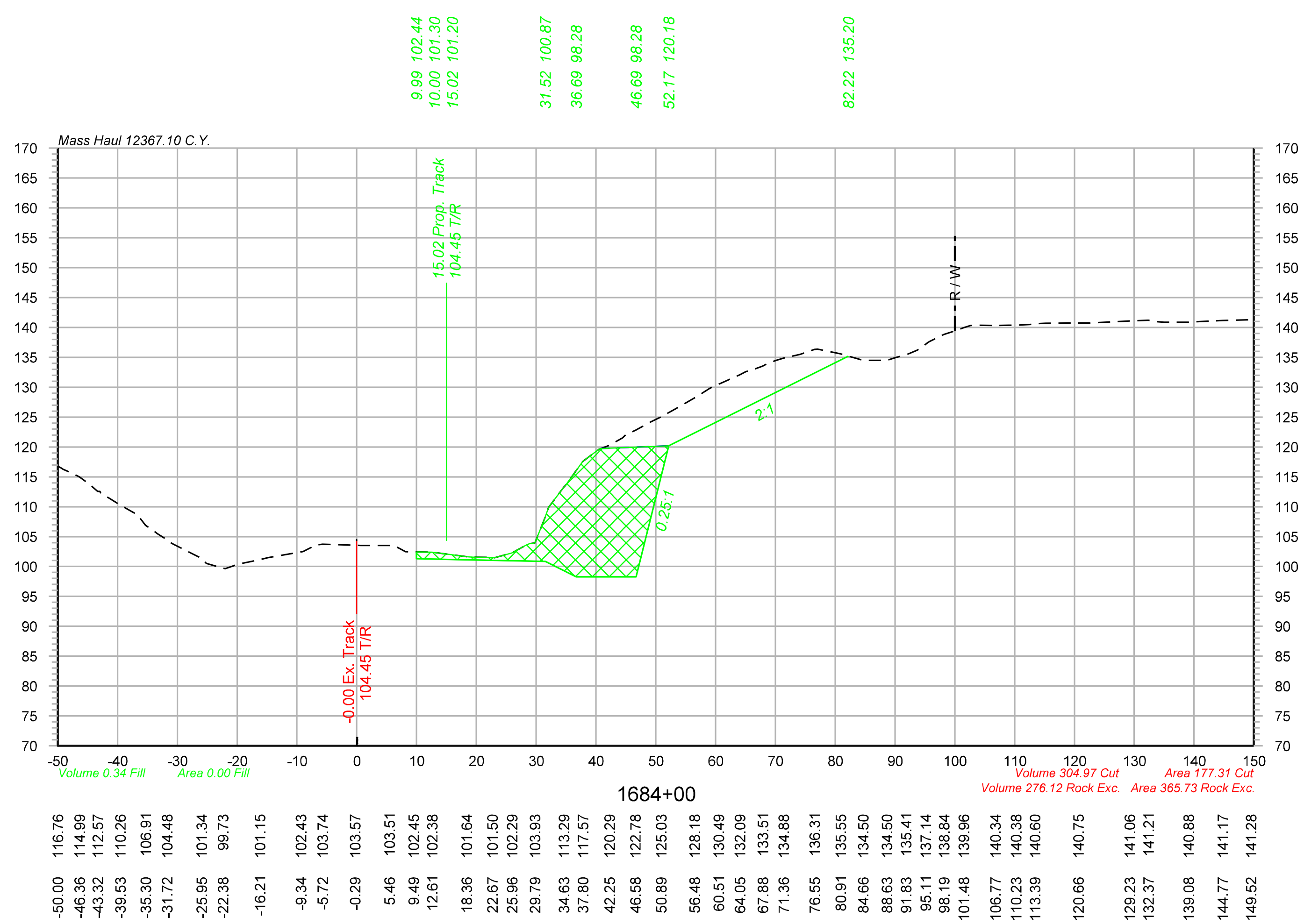
UNION PACIFIC RAILROAD

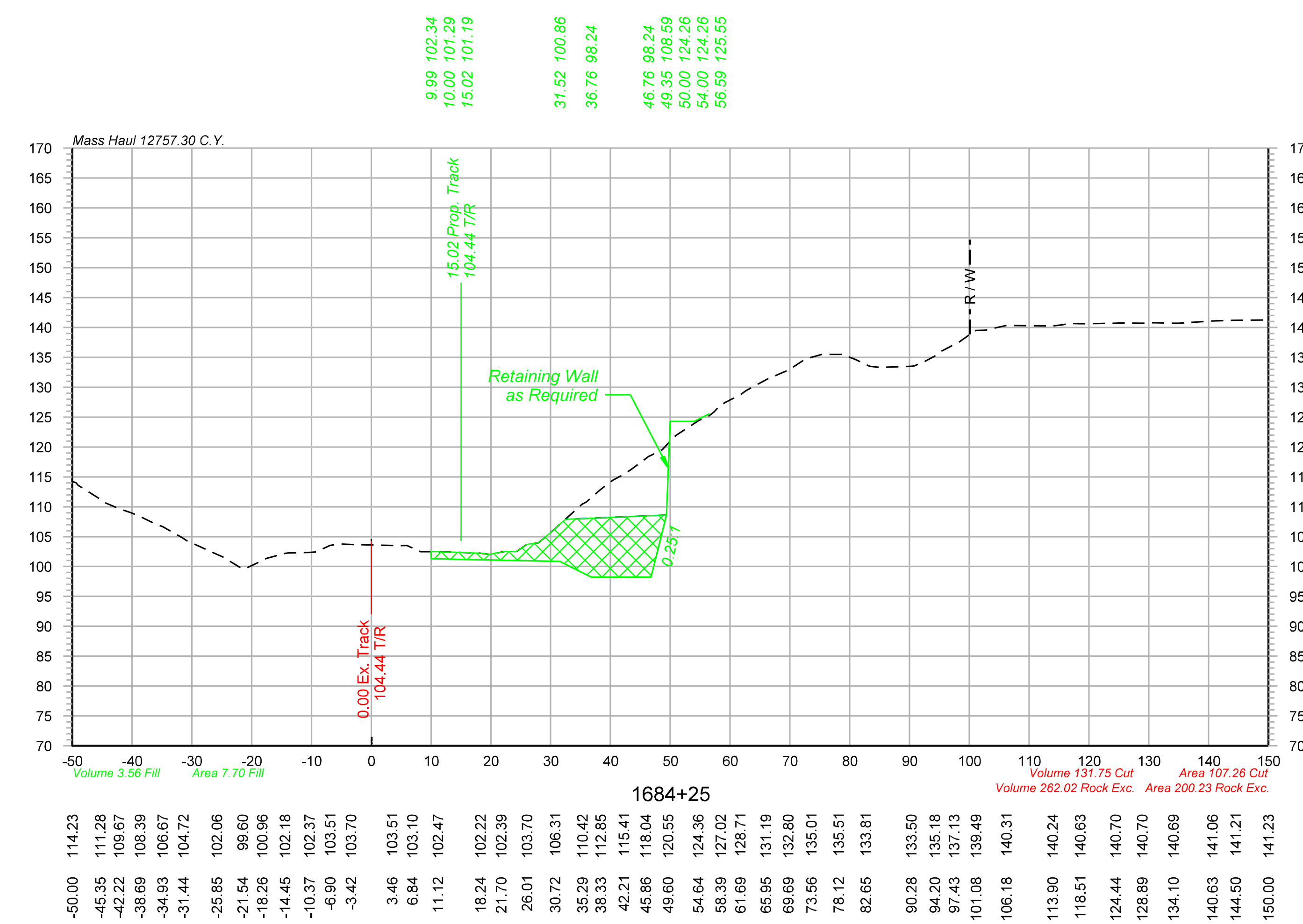
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1683+50 TO STA.1683+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 085 of 139

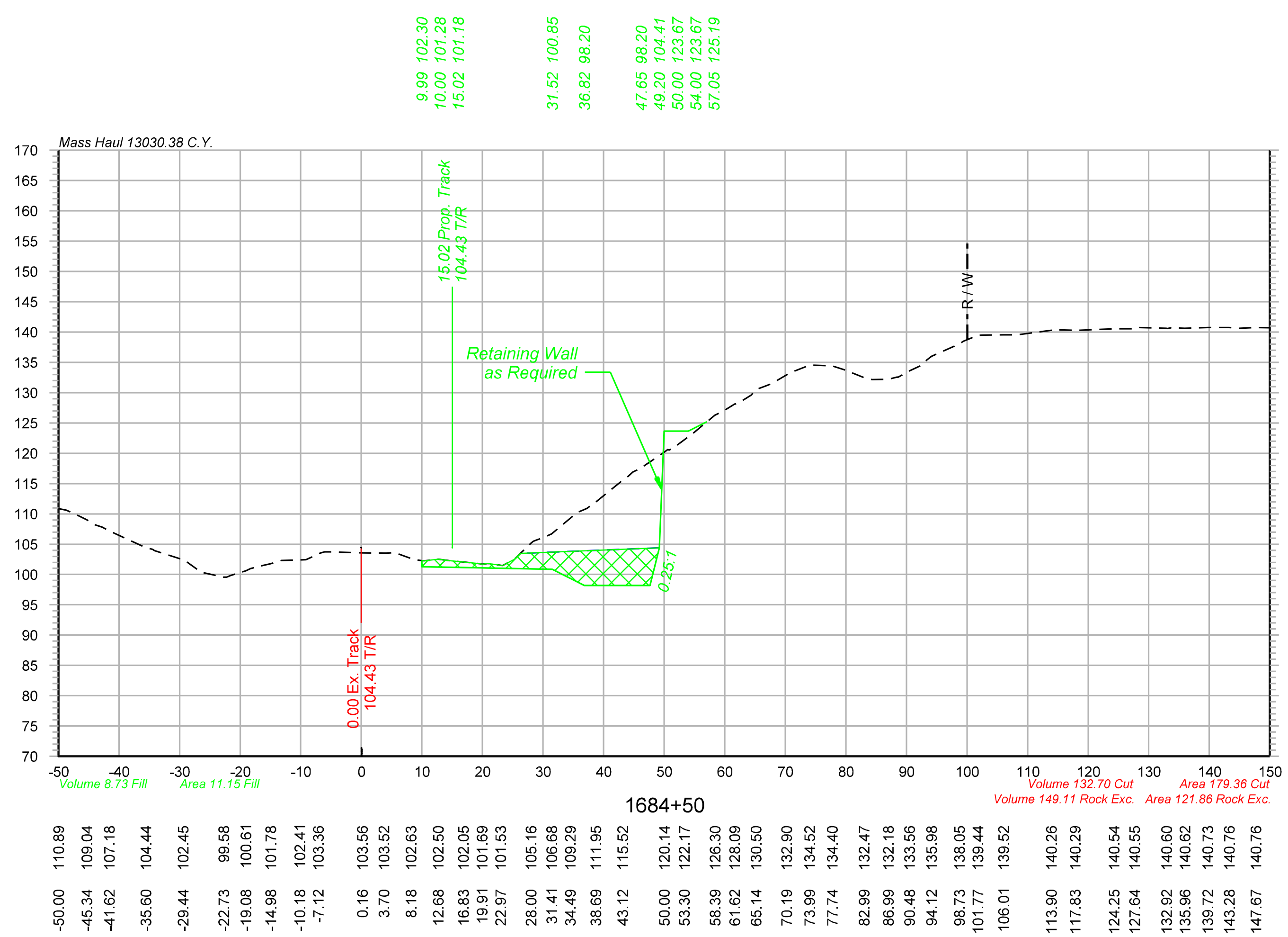
UNION PACIFIC RAILROAD

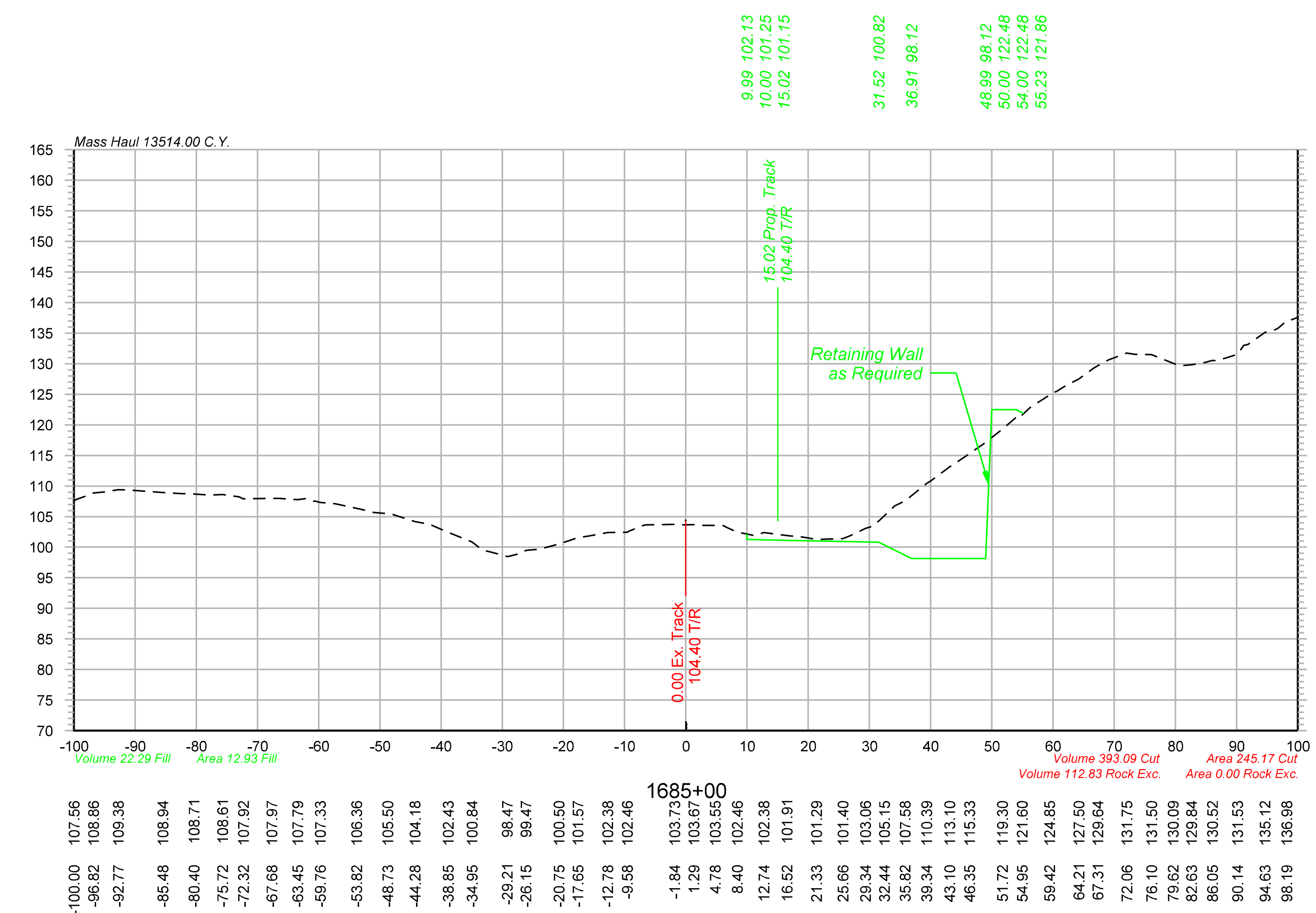
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1684+00 TO STA.1684+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

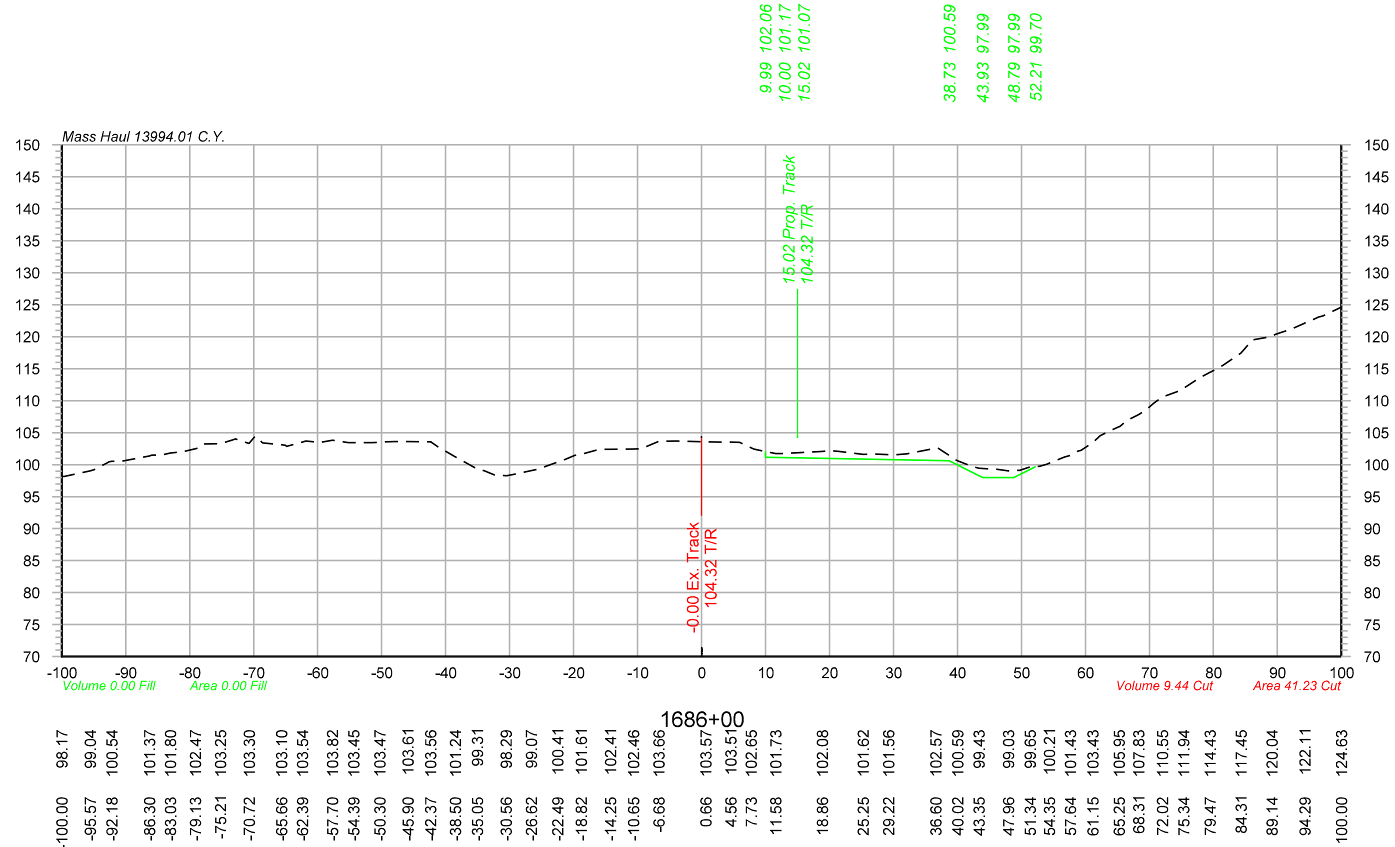
DRAWN BY: BWG	
CHECKED BY: RCK	
DATE: 10/20/2014	
SHEET NUMBER X 086 of 139	

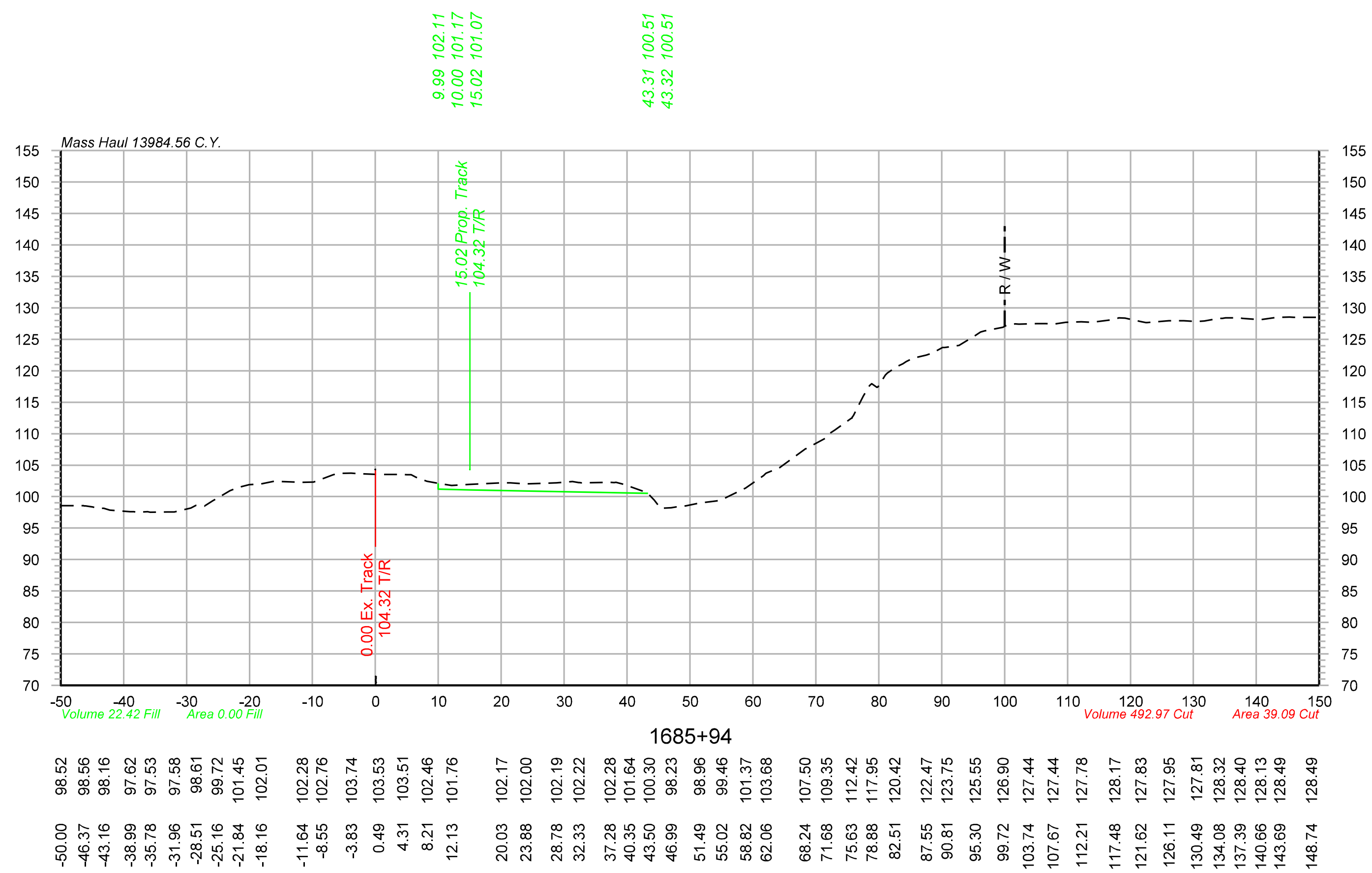
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

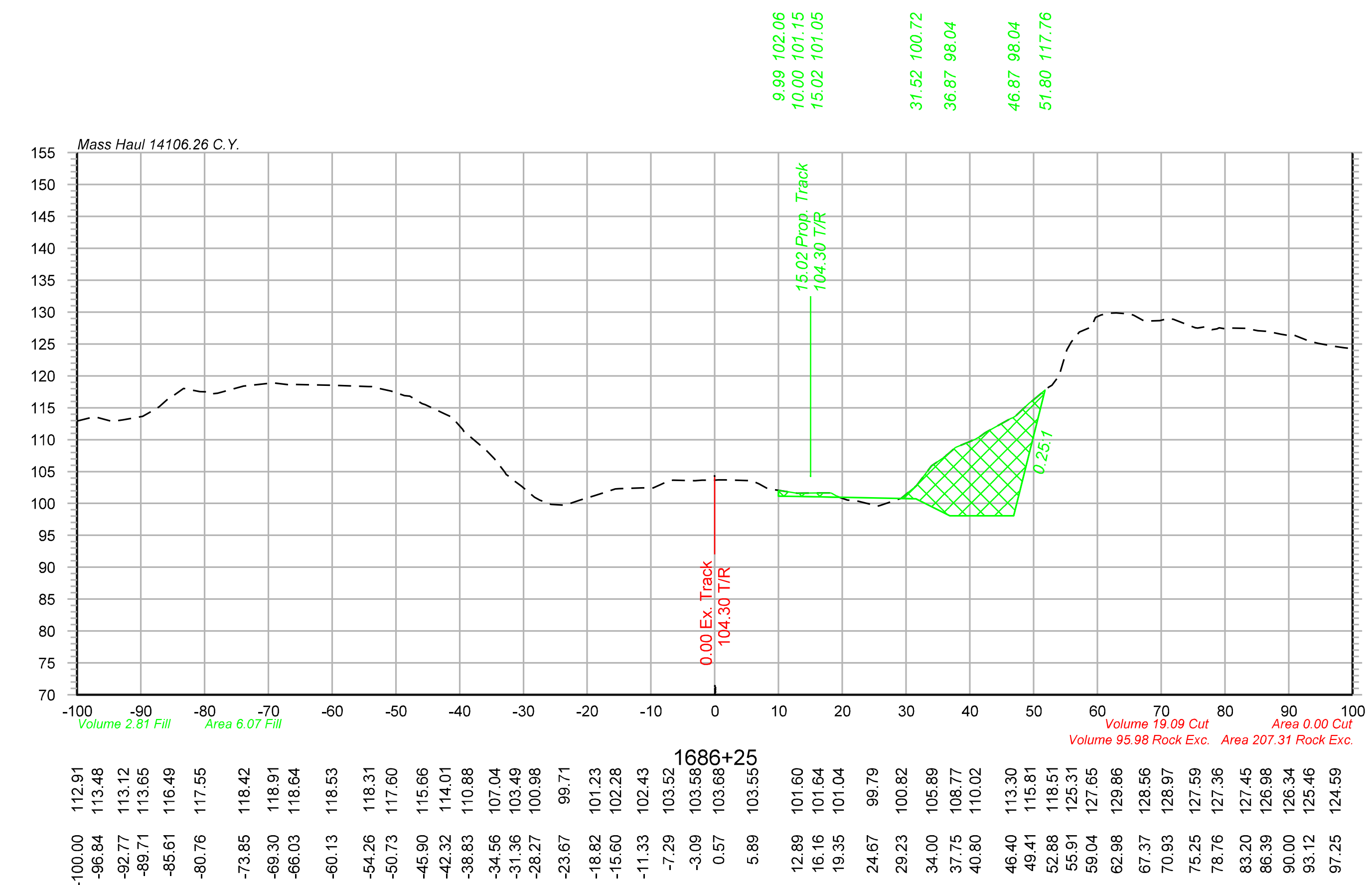
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1684+50 TO STA.1685+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014







Legend

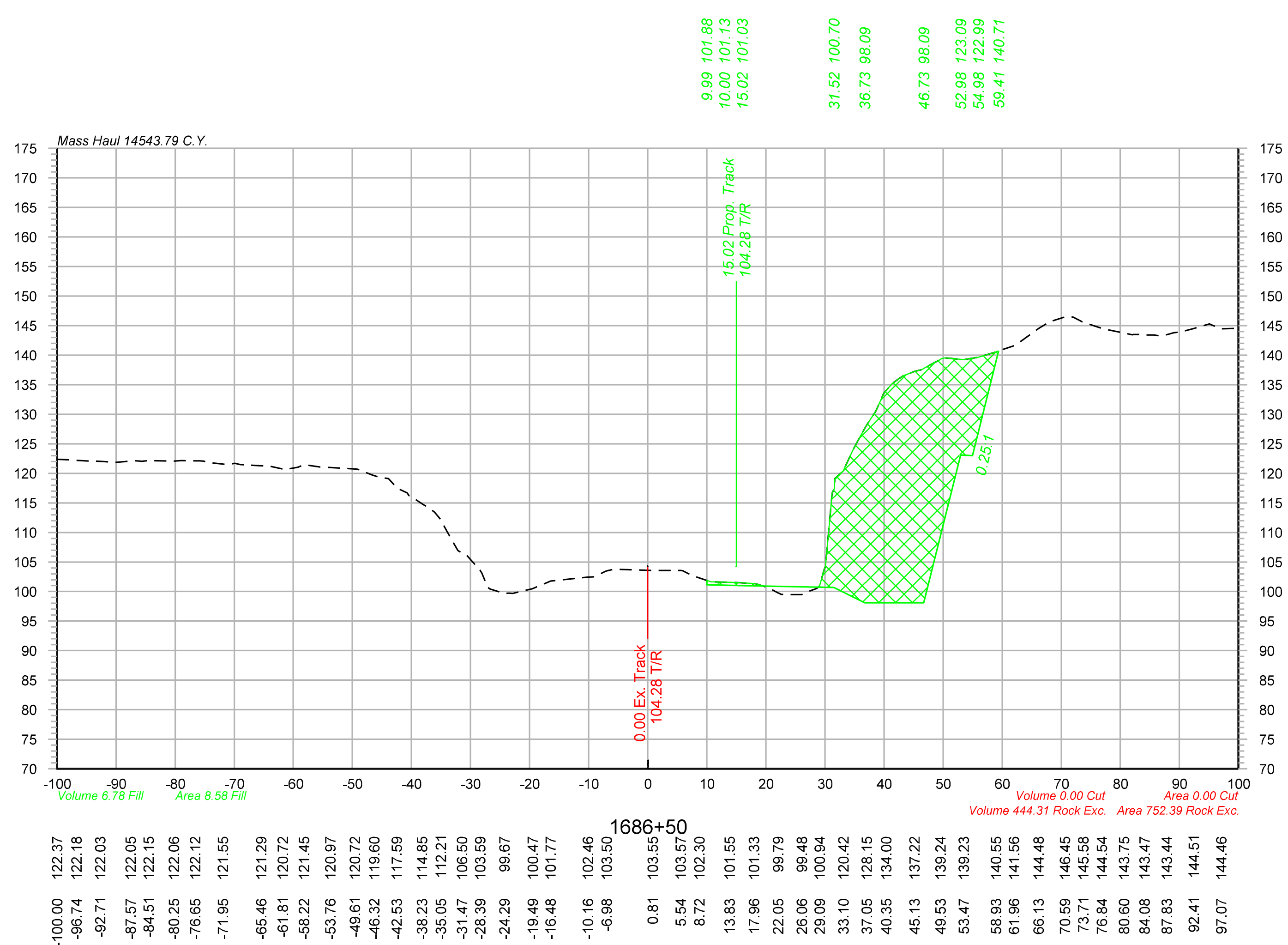
Assumed Rock Excavation

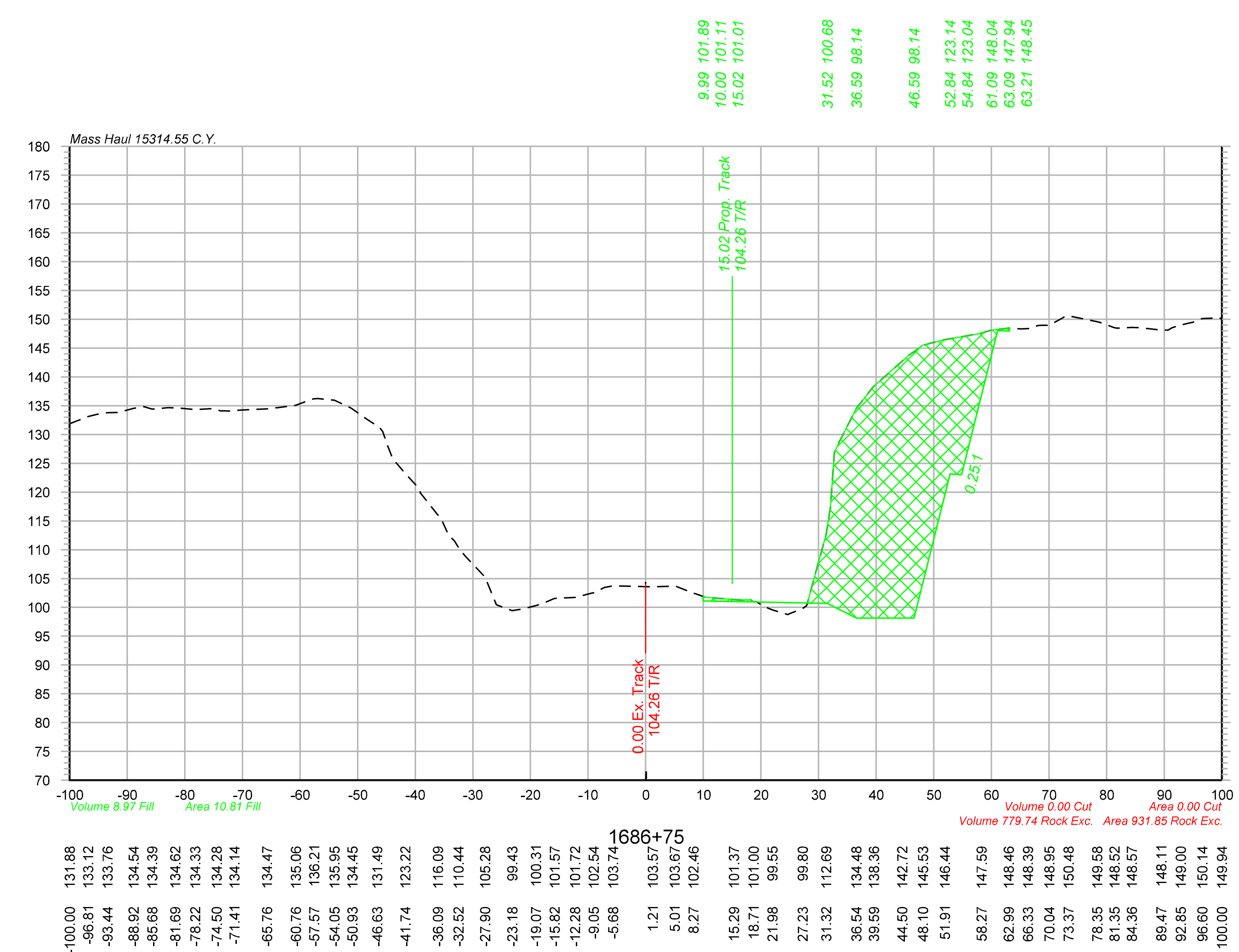
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 087 of 139	SHEET TITLE: CROSS SECTIONS STA.1685+94 TO STA.1686+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

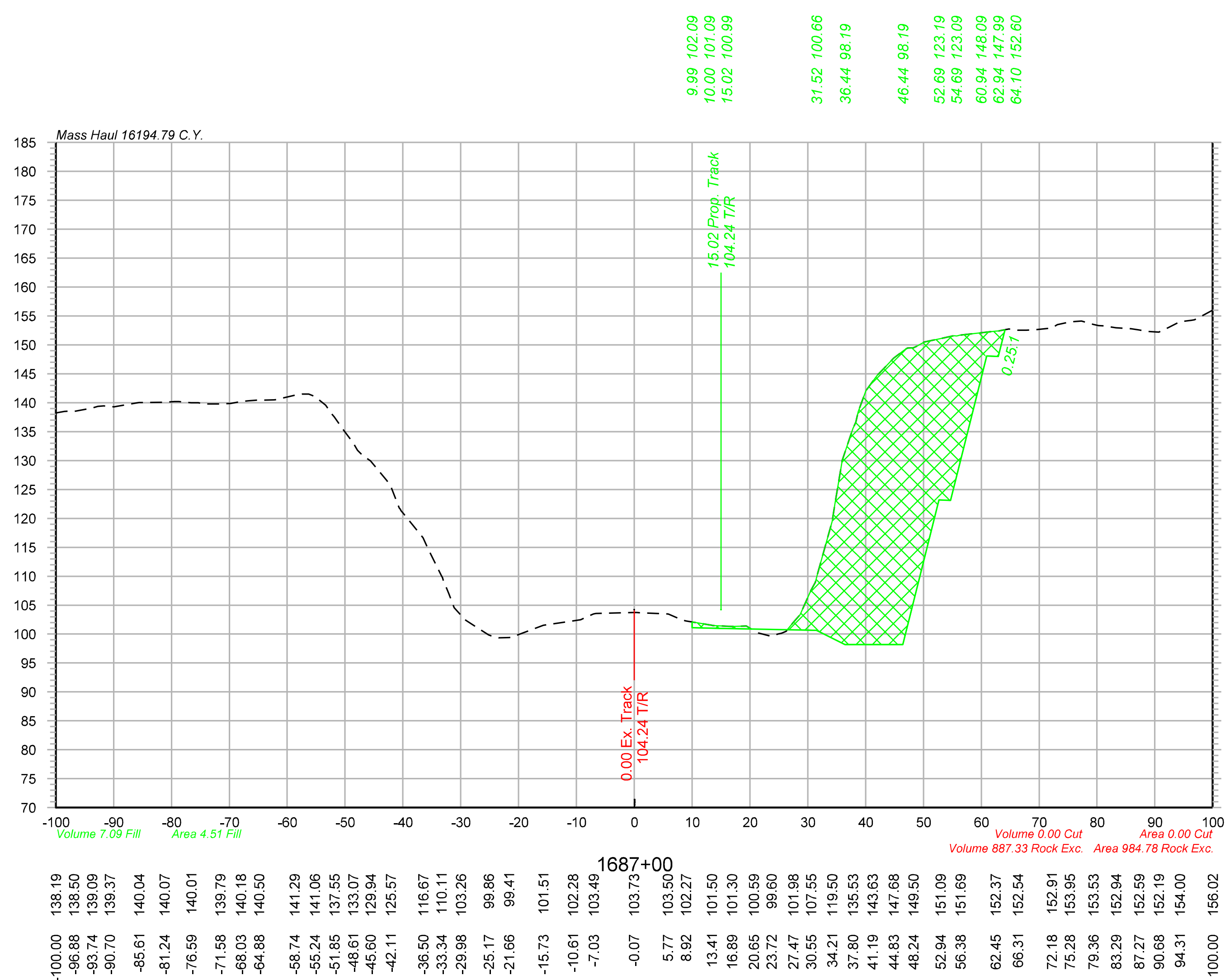
Assumed Rock Excavation

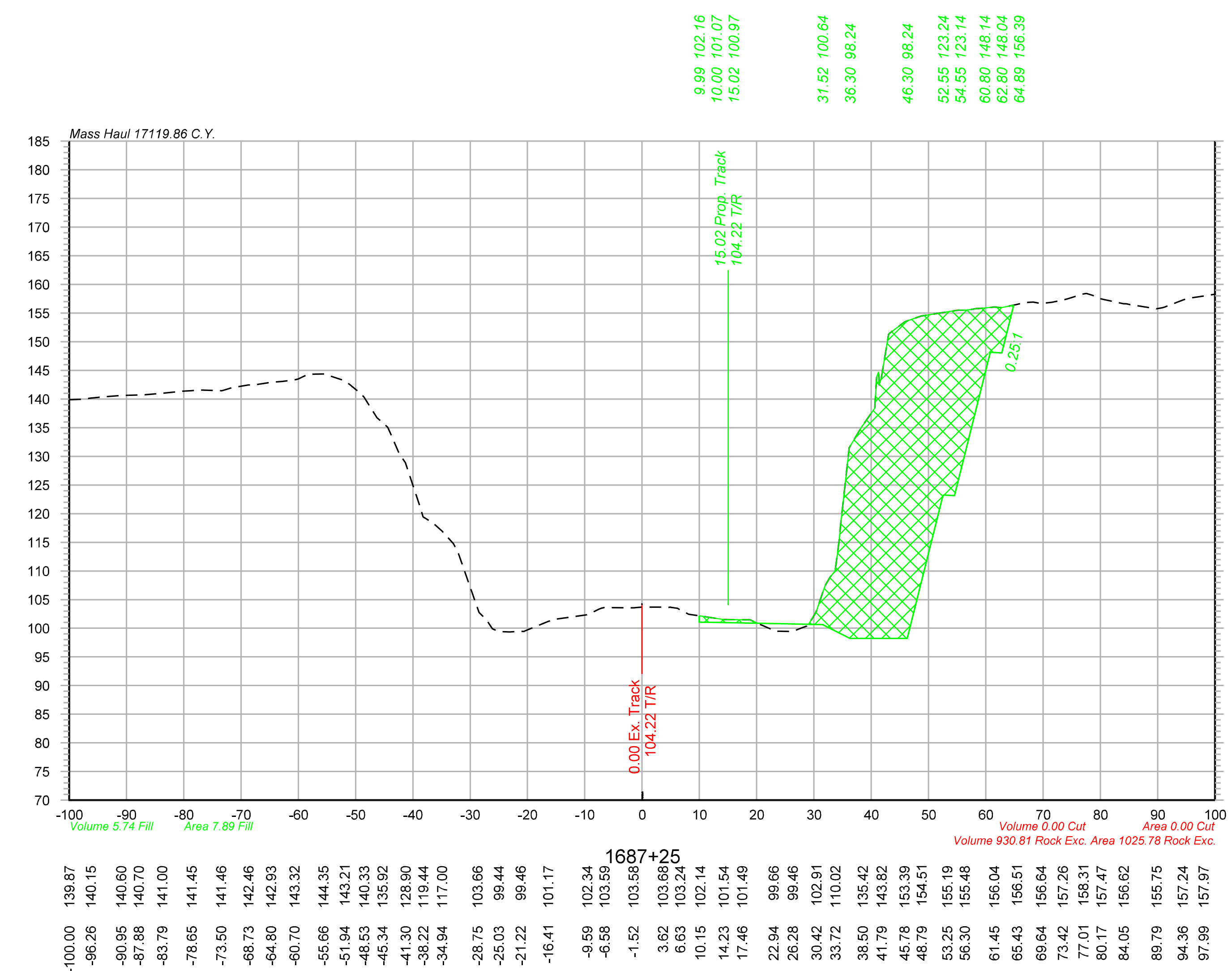
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 088 of 139	SHEET TITLE: CROSS SECTIONS STA.1686+50 TO STA.1686+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

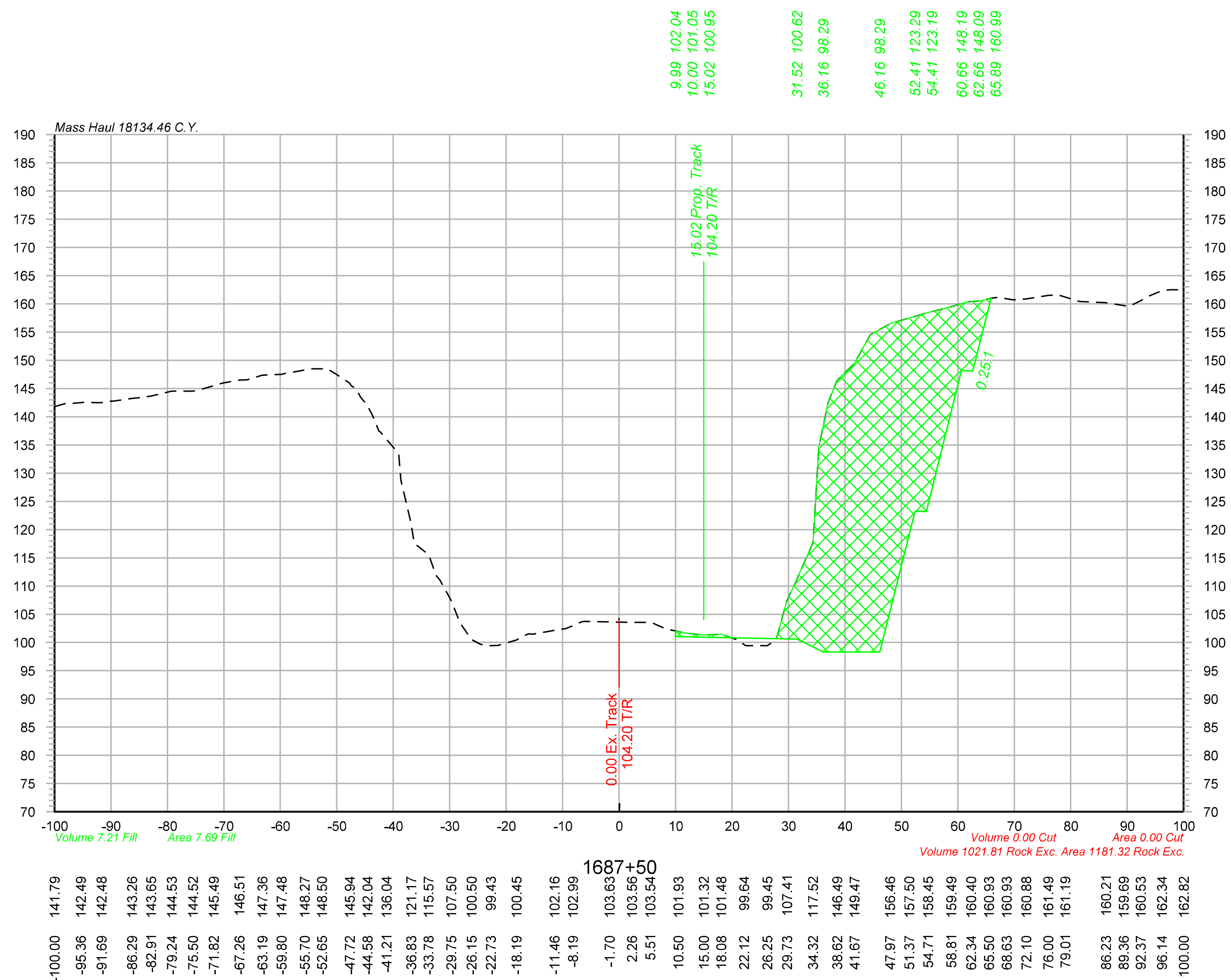
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

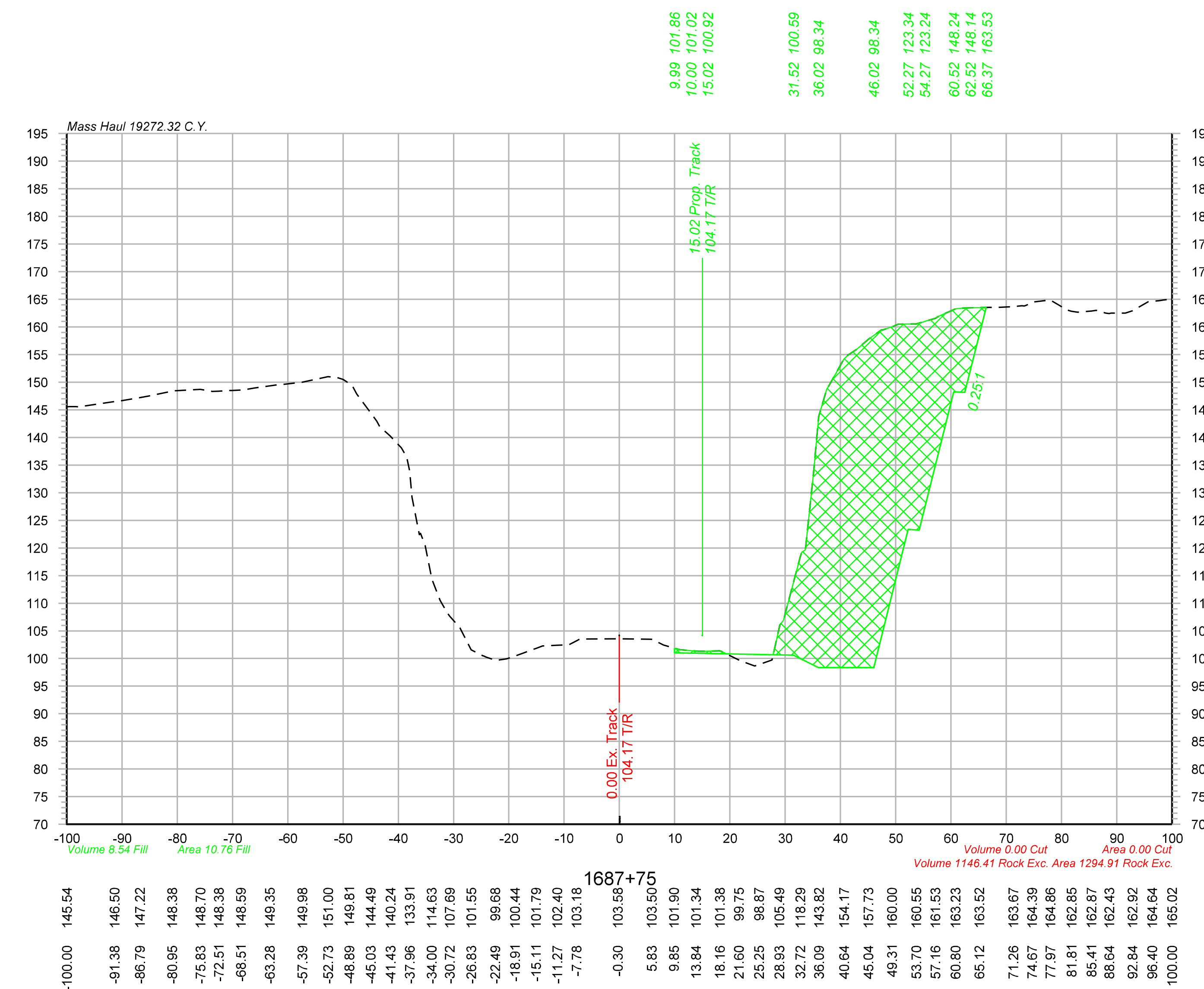
UNION PACIFIC

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 089 of 139	SHEET TITLE: CROSS SECTIONS STA.1687+00 TO STA.1687+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 090 of 139

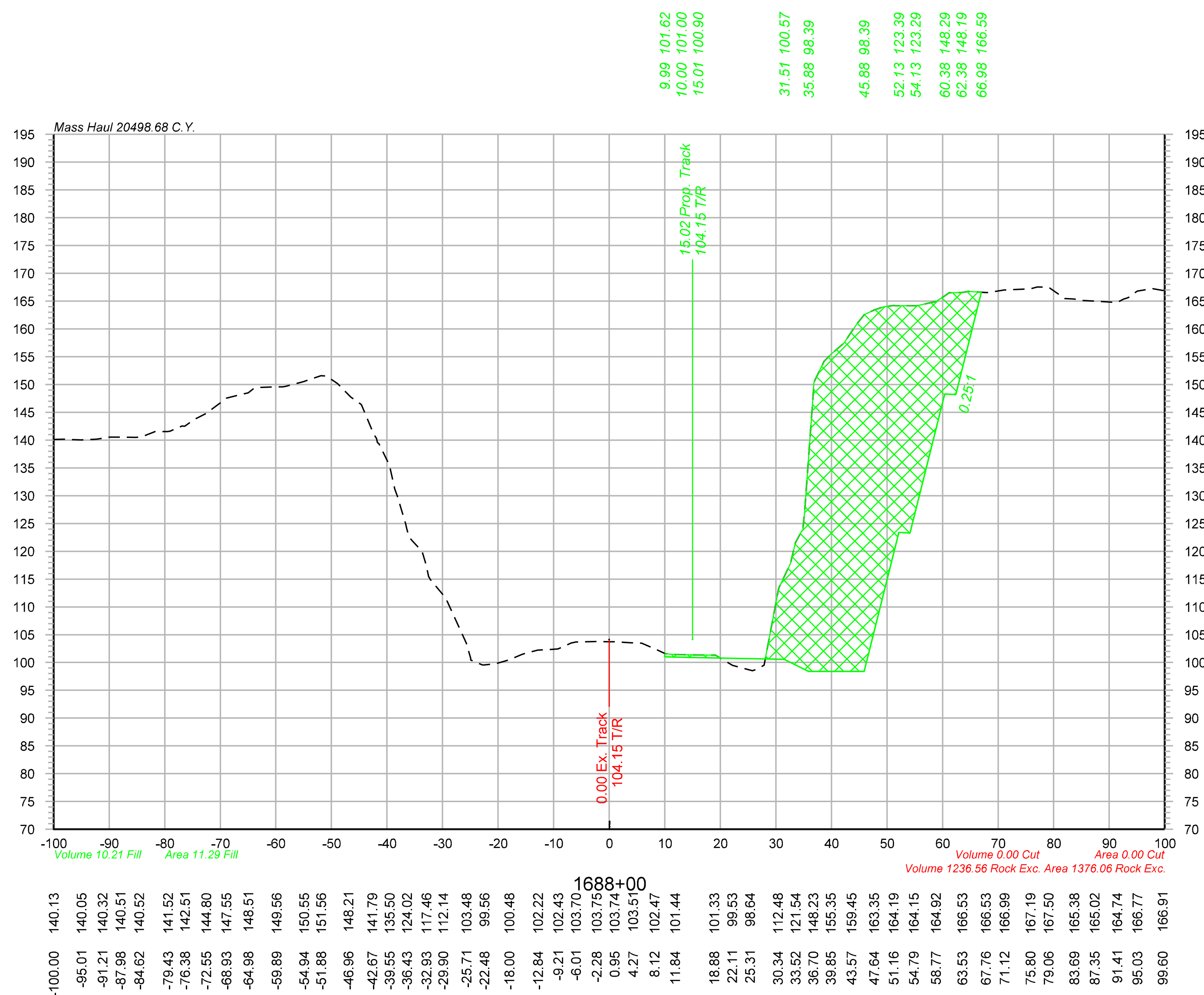
UNION PACIFIC RAILROAD

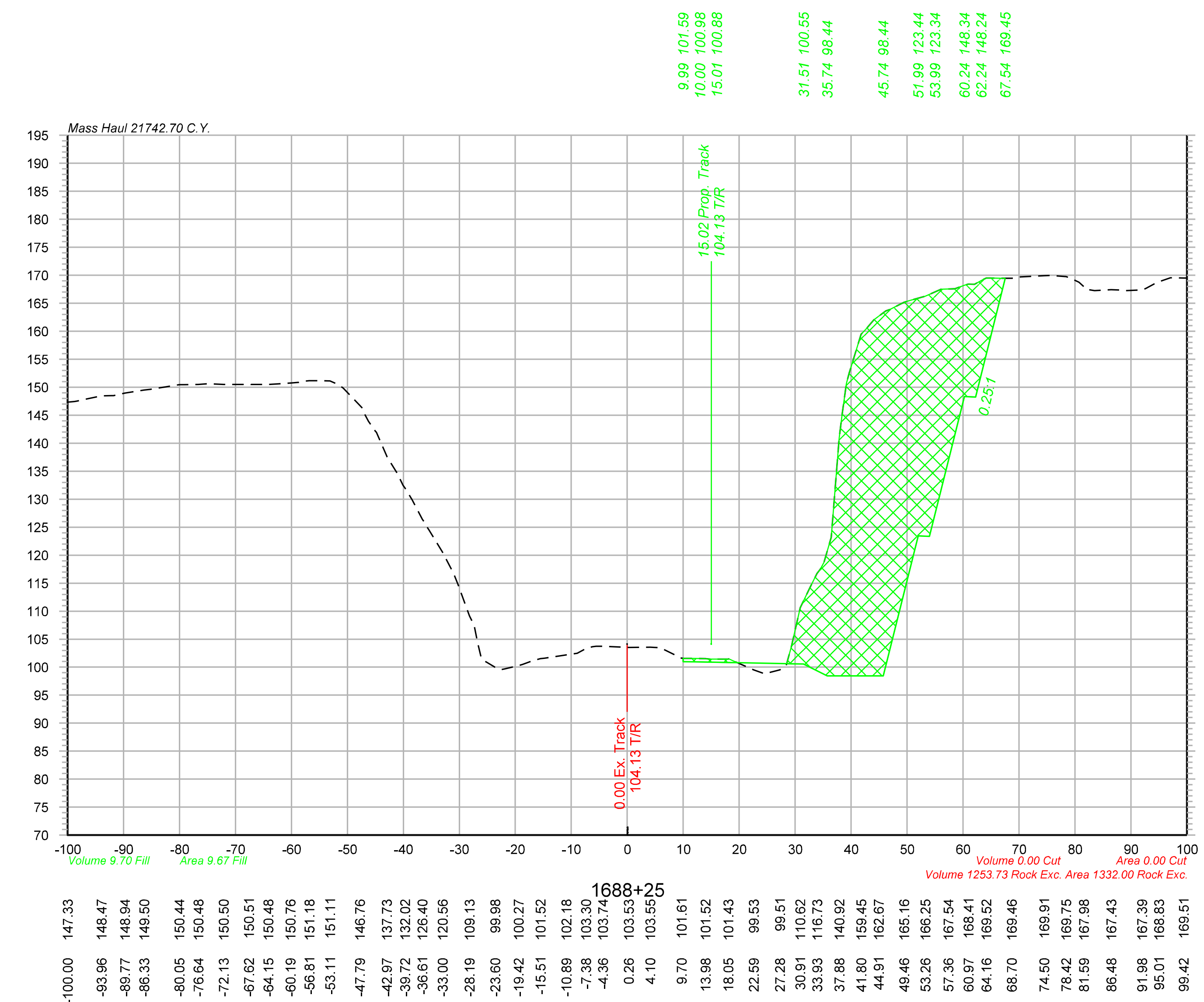
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1687+50 TO STA.1687+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

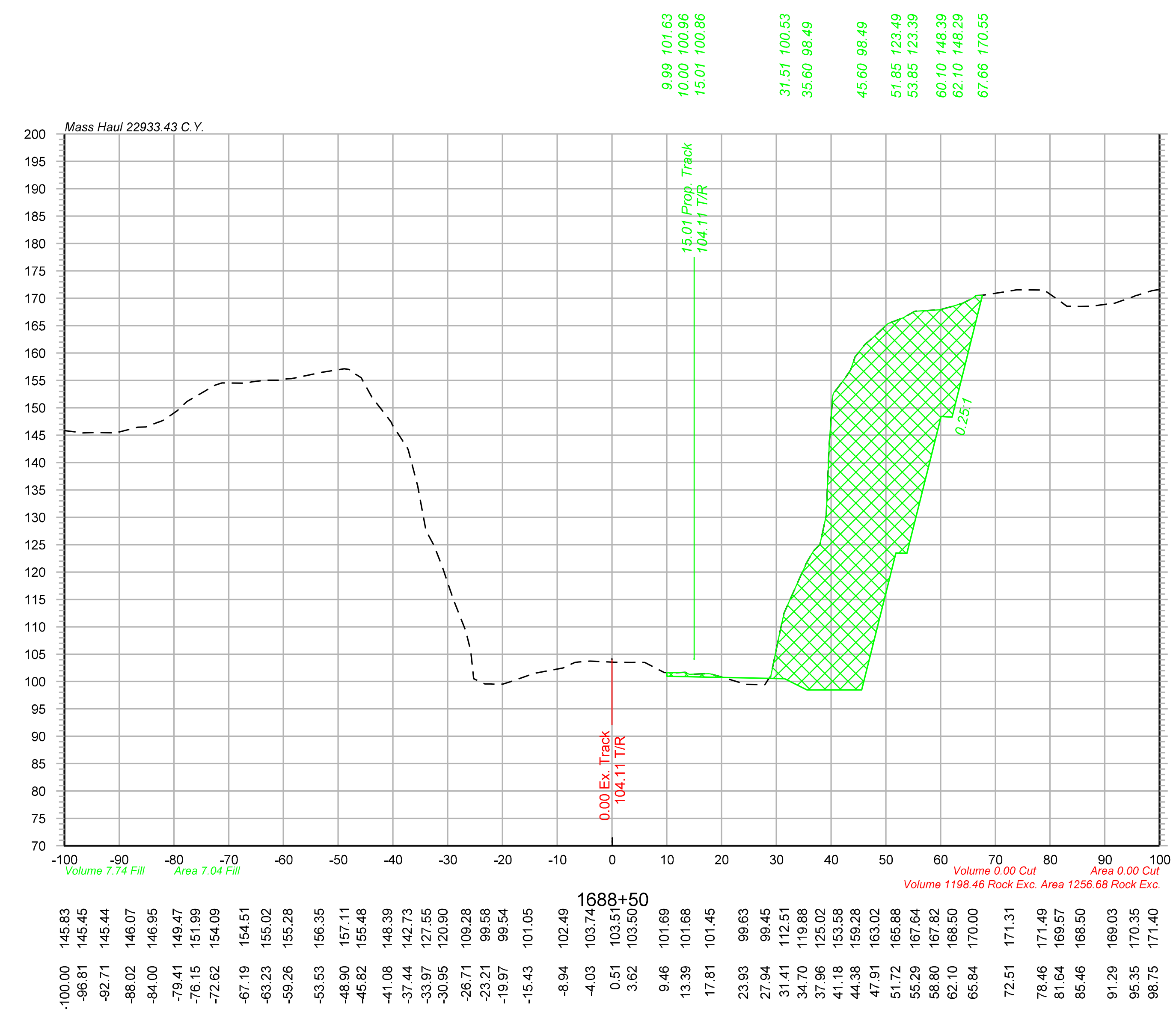
Assumed Rock Excavation

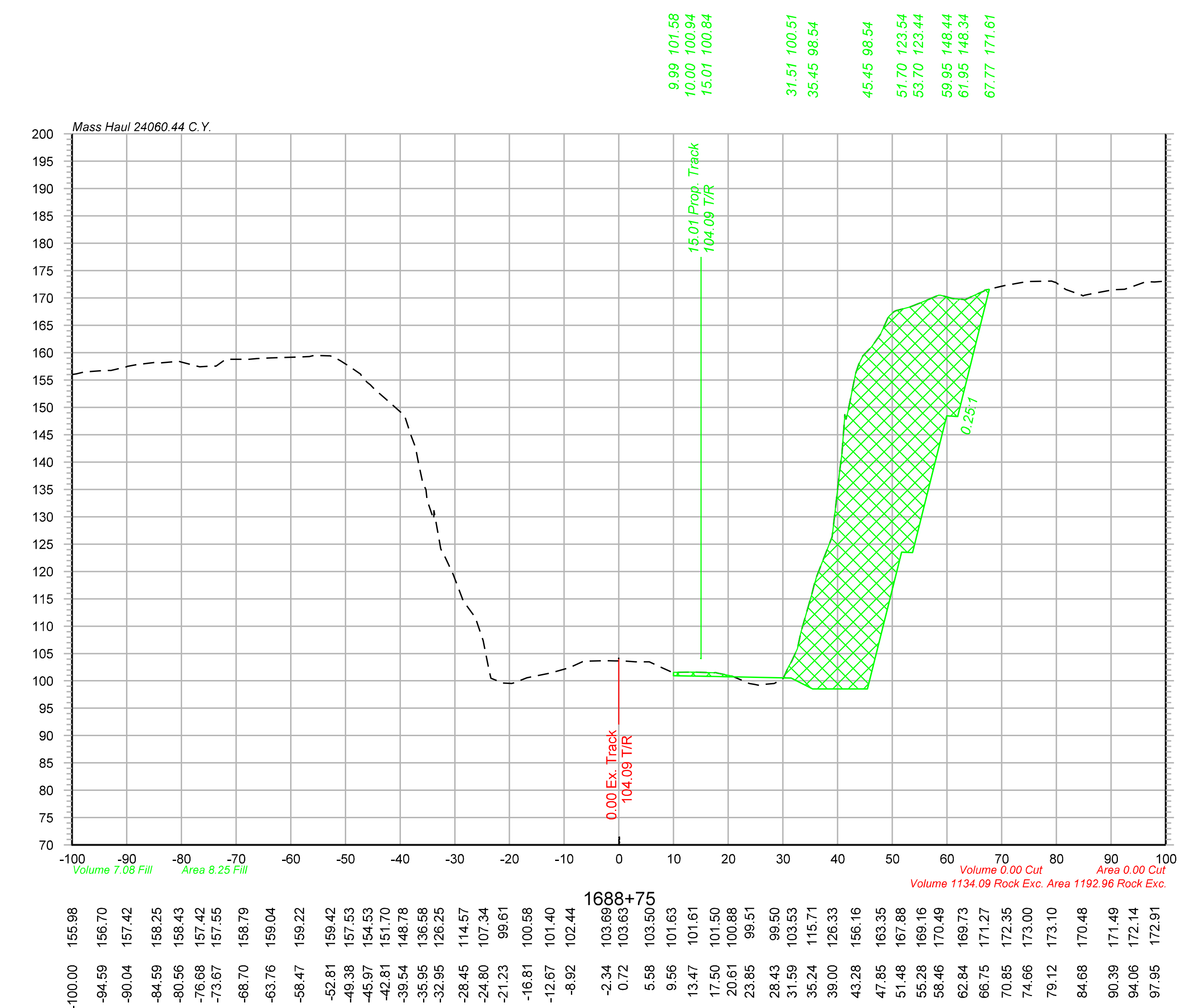
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 091 of 139	SHEET TITLE: CROSS SECTIONS STA.1688+00 TO STA.1688+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

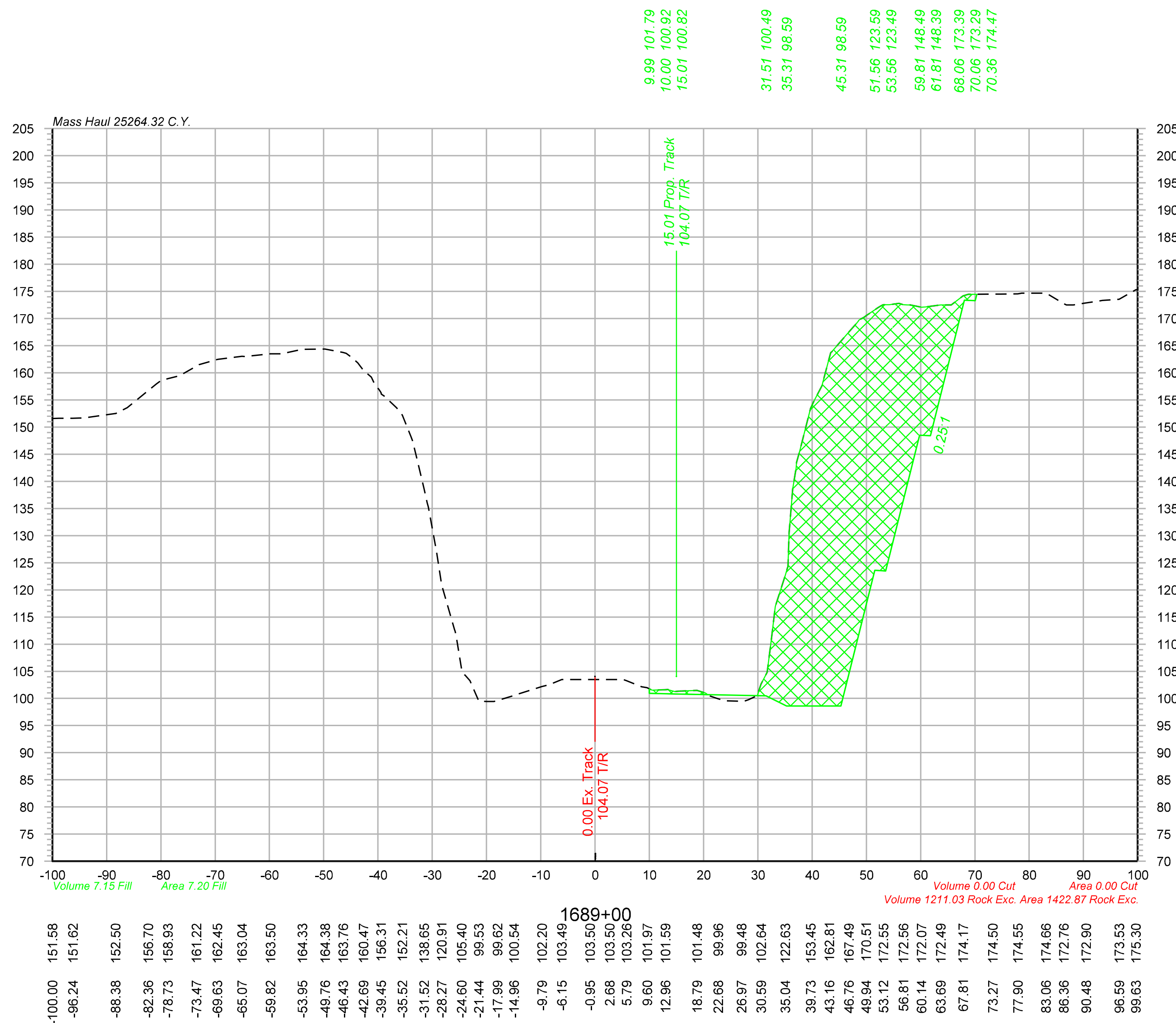
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 092 of 139

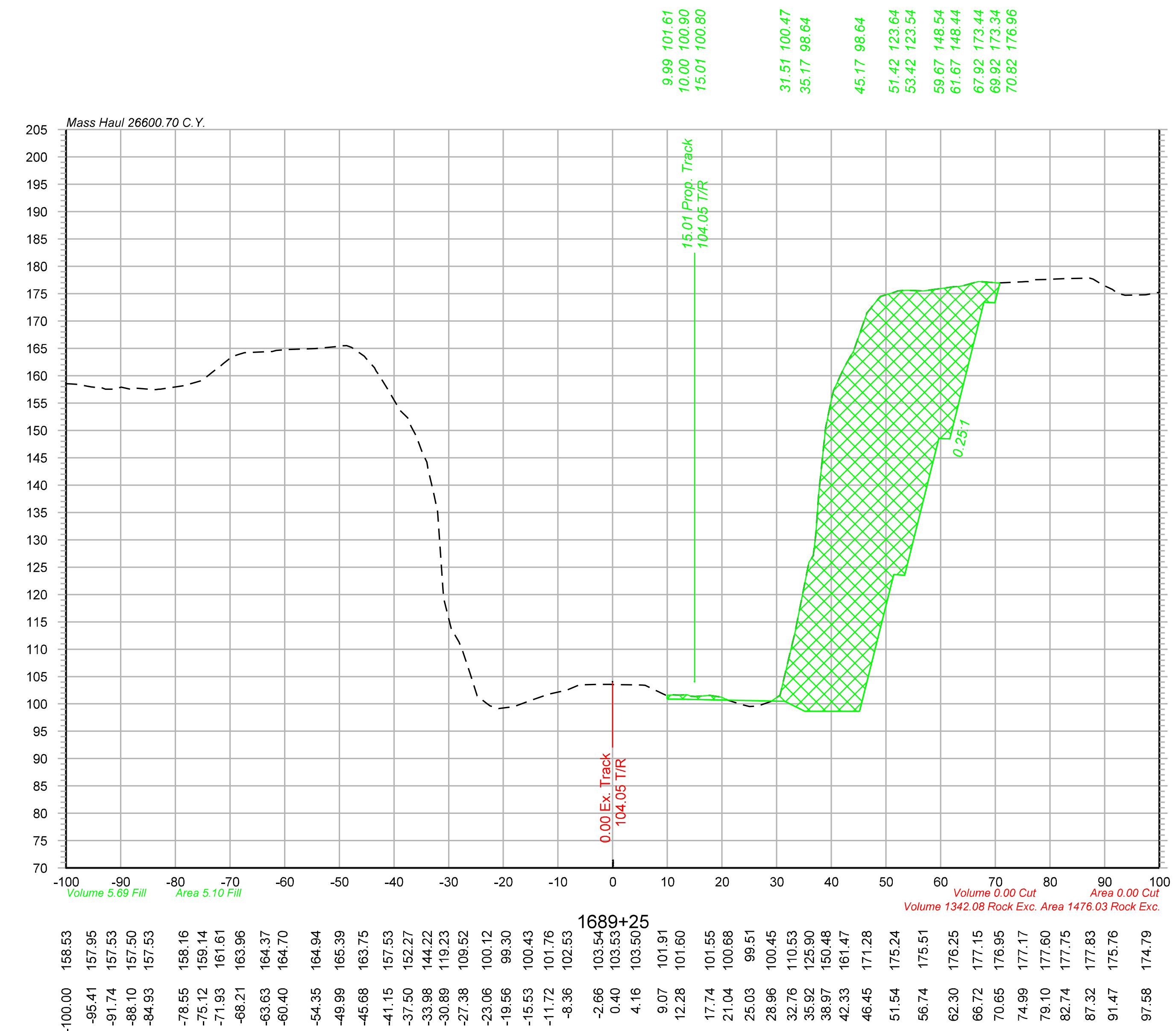
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1688+50 TO STA.1688+75





Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 093 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

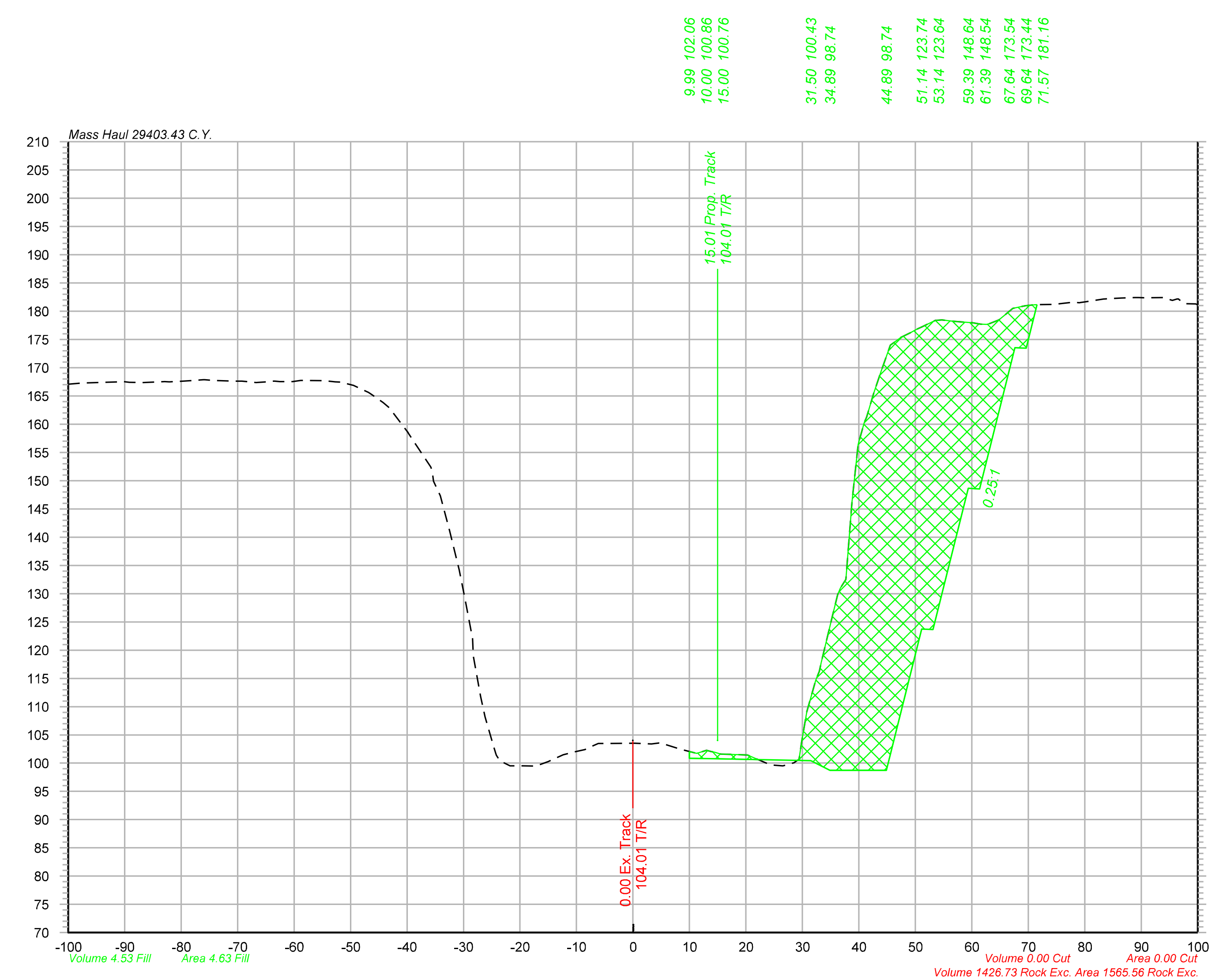
SHEET TITLE:
CROSS SECTIONS STA.1689+00 TO STA.1689+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

1689+50

Offset	Elevation
-100.00	163.76
-96.61	163.39
-91.34	164.11
-87.84	164.49
-83.60	164.49
-78.74	164.76
-75.28	165.24
-69.85	165.24
-65.60	165.42
-61.60	165.43
-56.96	165.36
-53.32	165.27
-48.91	162.83
-43.37	158.67
-40.14	154.54
-34.13	146.60
-29.88	129.70
-26.26	108.01
-22.55	99.99
-17.63	99.48
-13.19	101.28
-8.74	102.43
-5.38	103.51
0.08	103.37
5.65	103.50
9.05	102.07
12.40	102.09
15.82	101.50
18.96	101.49
25.42	99.58
29.46	100.03
34.08	121.98
37.23	128.27
43.41	169.34
46.43	173.52
50.84	175.37
57.34	177.39
62.02	177.57
67.45	179.18
70.93	179.39
73.97	179.46
77.47	179.68
81.26	179.62
84.76	179.63
88.55	179.81
92.46	179.60
96.67	177.16
100.00	176.42

1689+75



Offset	Elevation
-100.00	167.07
-90.94	167.50
-86.70	167.39
-82.94	167.52
-77.72	167.74
-74.39	167.74
-70.70	167.62
-66.74	167.38
-63.40	167.62
-60.30	167.54
-54.68	167.69
-49.47	166.88
-46.19	165.22
-43.15	162.91
-39.90	158.63
-35.81	152.46
-32.48	141.19
-28.40	122.04
-24.72	103.15
-21.57	99.51
-17.21	99.47
-13.63	100.90
-10.24	102.01
-7.20	103.01
0.16	103.51
3.29	103.41
8.36	102.49
11.37	101.77
14.43	101.93
18.14	101.50
21.82	100.76
26.46	99.50
29.86	103.76
32.99	116.22
36.27	129.83
39.89	156.41
43.92	169.28
47.44	175.40
51.15	177.19
54.70	178.46
60.12	177.96
63.20	177.82
67.26	180.49
70.91	181.13
74.55	181.20
77.93	181.57
83.37	182.19
86.47	182.34
89.54	182.41
93.86	182.41
97.71	181.33

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

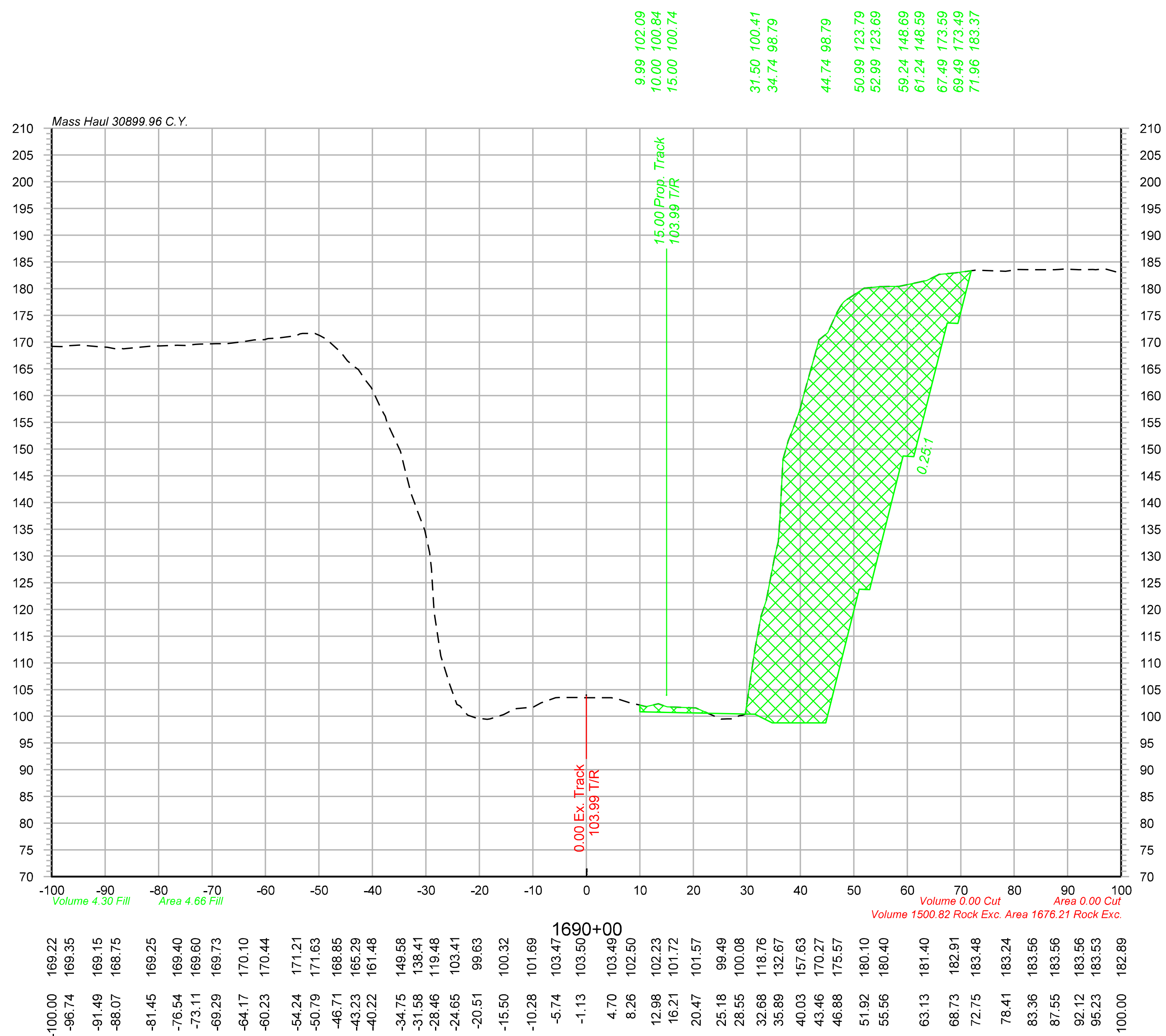
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 094 of 139

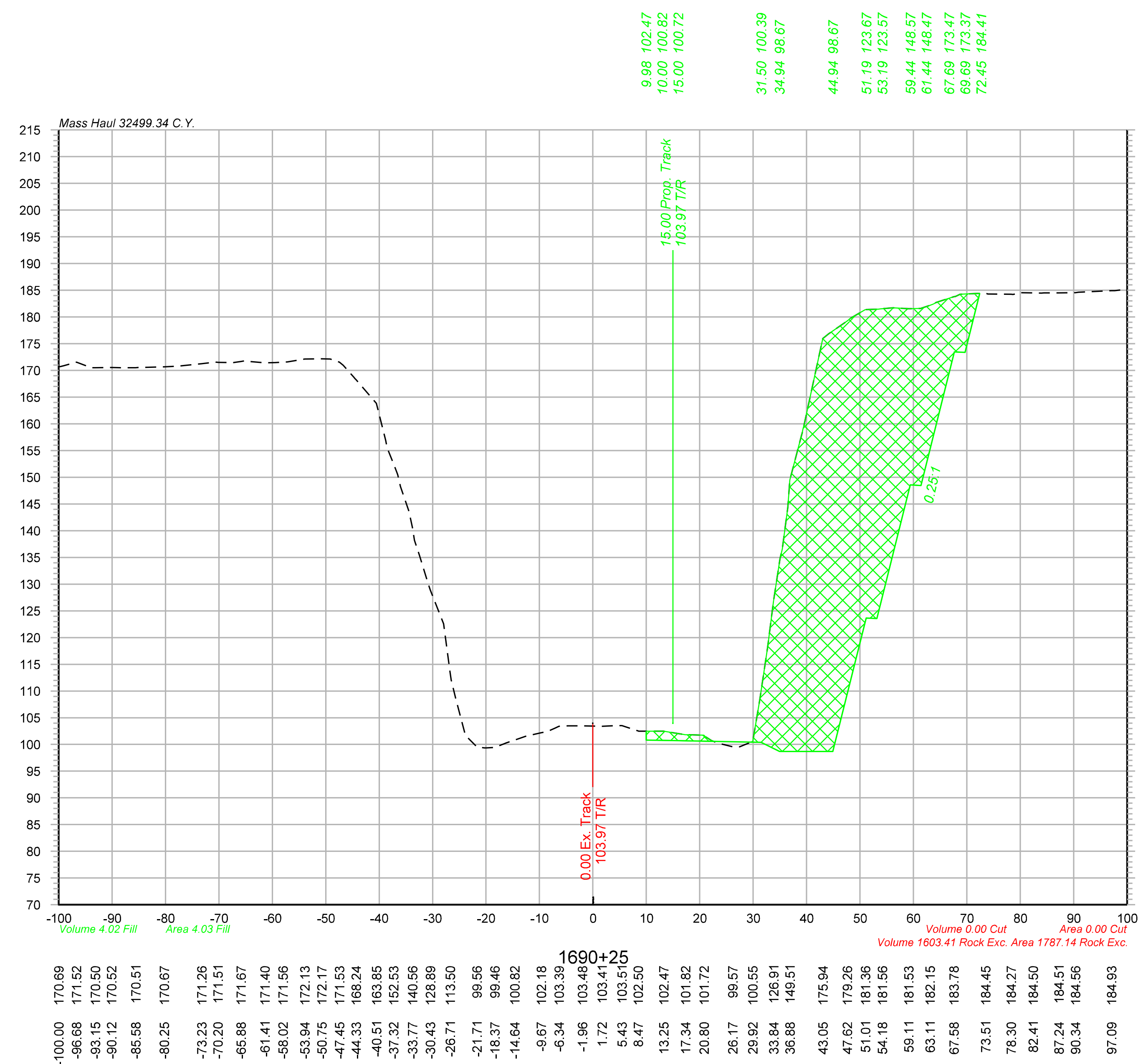
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1689+50 TO STA.1689+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

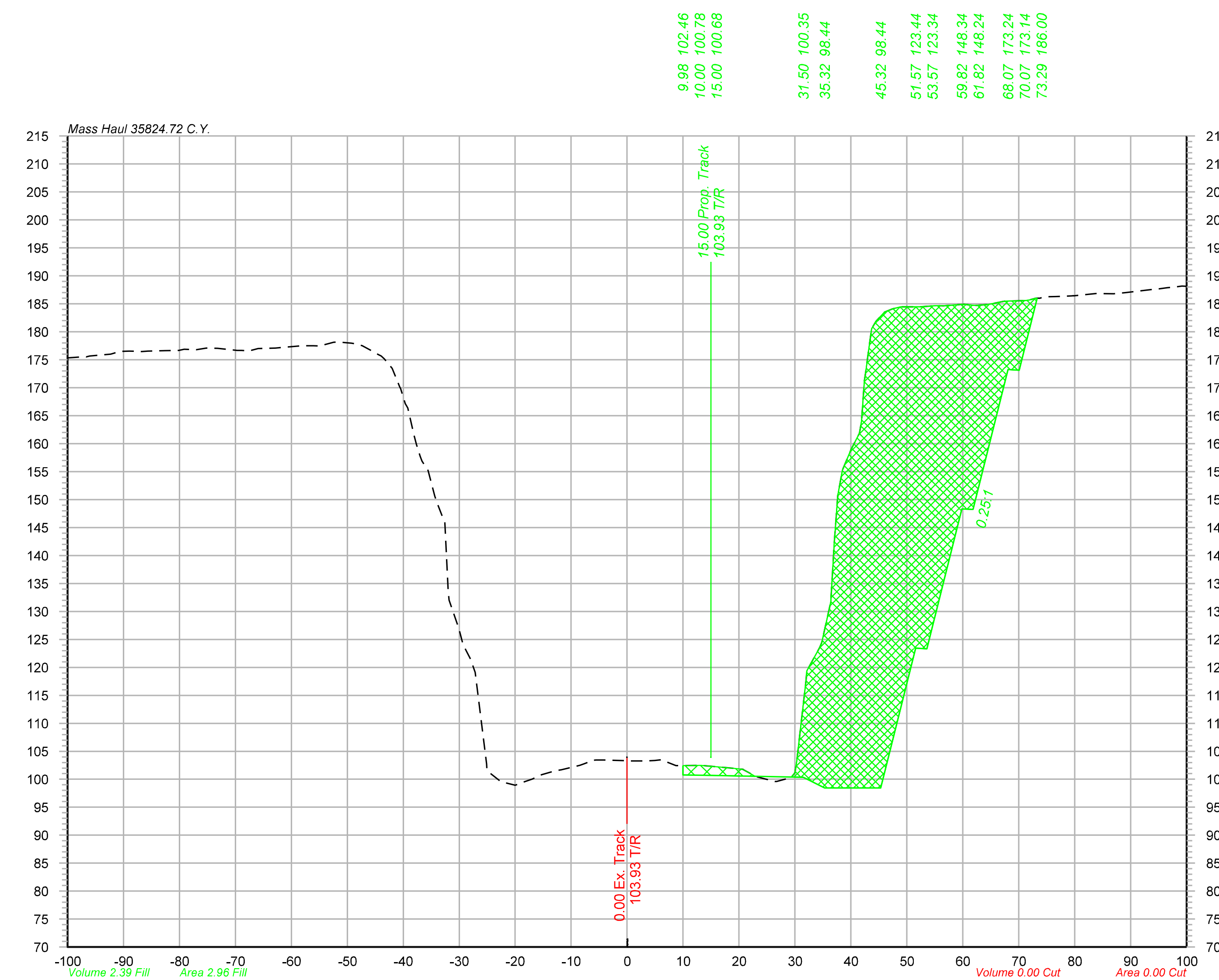
Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD	Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline	
DATE: 10/20/2014		
SHEET NUMBER X 095 of 139	SHEET TITLE: CROSS SECTIONS STA.1690+00 TO STA.1690+25	

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Offset	Elevation
-100.00	174.00
-96.89	173.28
-91.78	173.04
-84.89	173.47
-80.47	173.68
-77.21	174.07
-73.48	173.69
-69.98	174.14
-64.91	174.38
-61.08	173.59
-58.04	173.63
-53.94	174.51
-47.64	172.01
-44.19	169.49
-40.55	163.47
-36.23	149.69
-32.23	143.51
-28.90	128.77
-25.08	104.43
-21.44	99.34
-18.36	99.45
-13.72	101.41
-10.07	102.23
-5.42	103.37
0.56	103.38
6.04	103.48
12.02	102.42
20.68	101.57
24.41	100.24
27.96	100.08
31.12	102.66
34.18	124.23
37.85	153.53
41.56	164.90
44.57	174.44
49.60	180.47
53.20	182.49
57.57	183.10
62.22	182.79
67.60	183.61
71.92	184.94
75.41	184.63
78.61	185.52
84.42	185.60
89.72	186.32
94.80	186.31
100.00	186.50



Offset	Elevation
-100.00	175.35
-96.72	175.52
-92.29	176.02
-89.00	176.53
-85.69	176.54
-82.59	176.62
-79.18	176.88
-75.22	177.09
-69.70	176.68
-65.94	177.00
-62.85	177.07
-58.07	177.49
-54.96	177.47
-51.76	178.18
-48.29	177.79
-45.26	176.38
-41.98	173.45
-38.05	161.47
-34.35	150.58
-30.08	126.96
-25.10	102.73
-20.17	98.96
-17.00	100.02
-13.10	101.45
-8.47	102.49
-4.14	103.45
0.00	103.33
3.72	103.28
7.14	103.06
13.25	102.50
18.77	101.97
21.90	101.09
25.60	99.83
29.31	100.29
32.34	119.72
36.08	130.22
40.03	158.94
43.08	175.99
47.42	184.09
51.96	184.46
55.34	184.67
60.23	184.93
64.54	184.90
71.20	185.60
74.53	186.25
77.74	186.35
83.81	186.84
86.96	186.81
93.70	187.54
97.94	188.02

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC RAILROAD

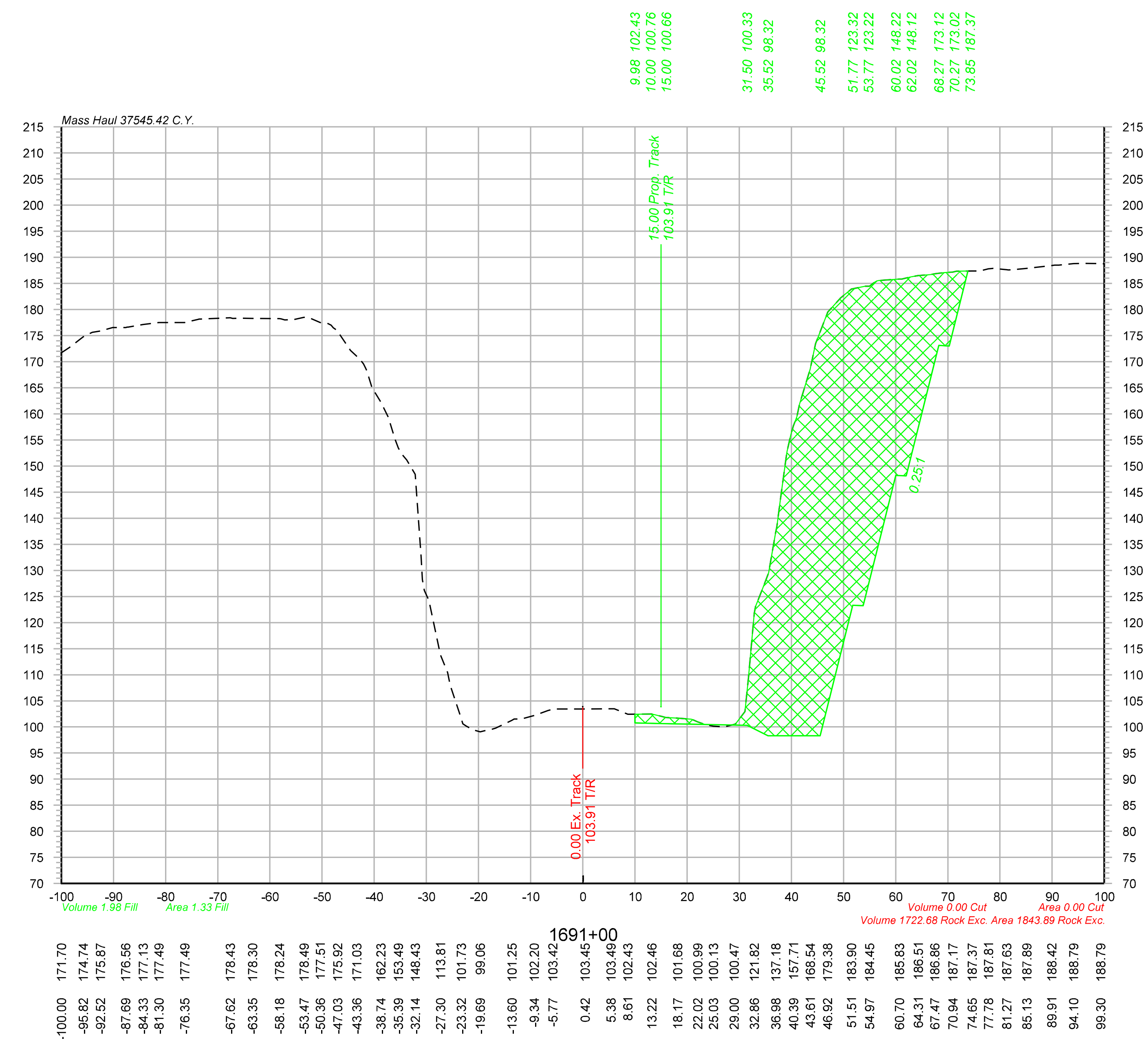
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 096 of 139

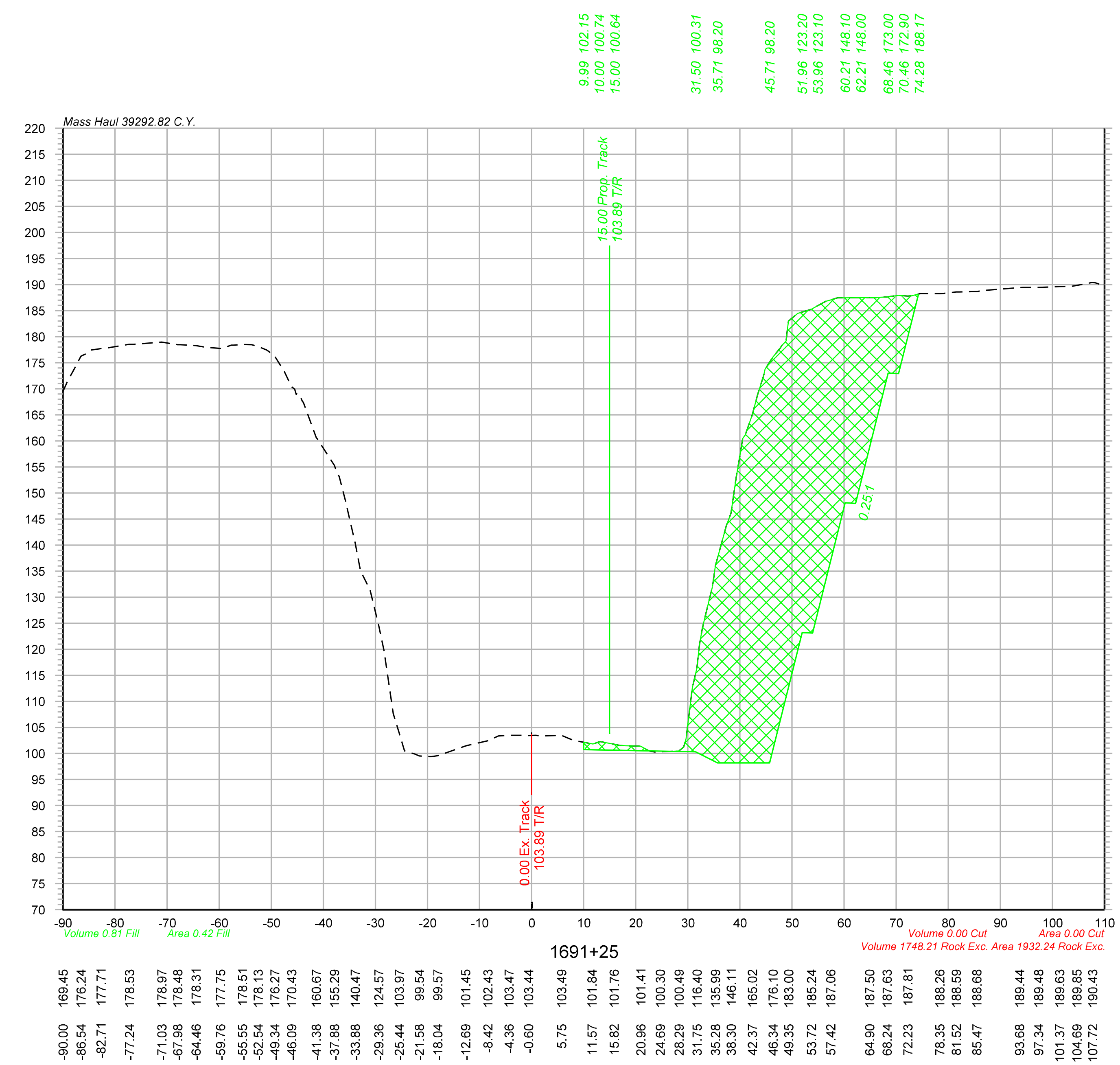
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1690+50 TO STA.1690+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

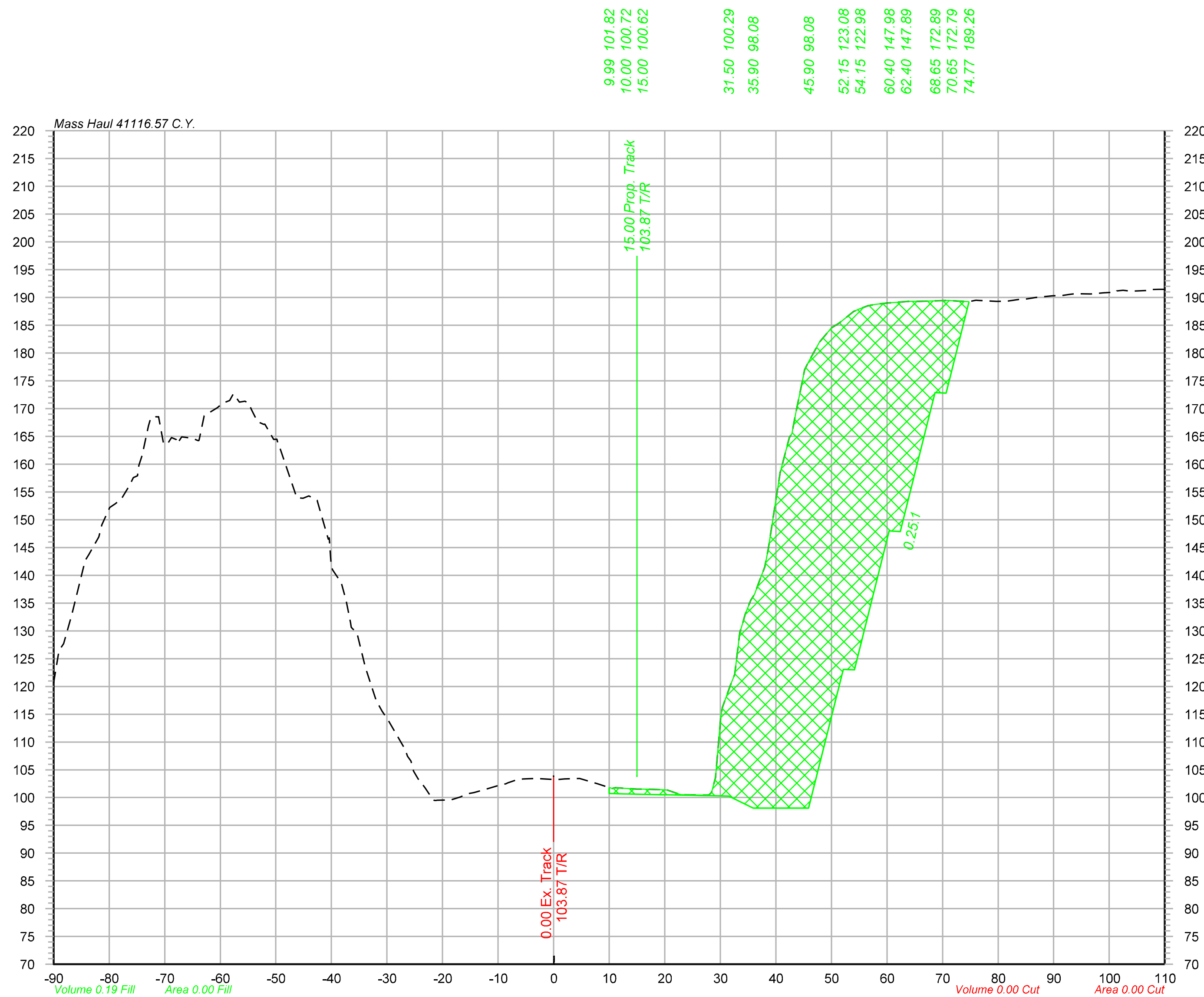
OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 097 of 139	SHEET TITLE: CROSS SECTIONS STA.1691+00 TO STA.1691+25

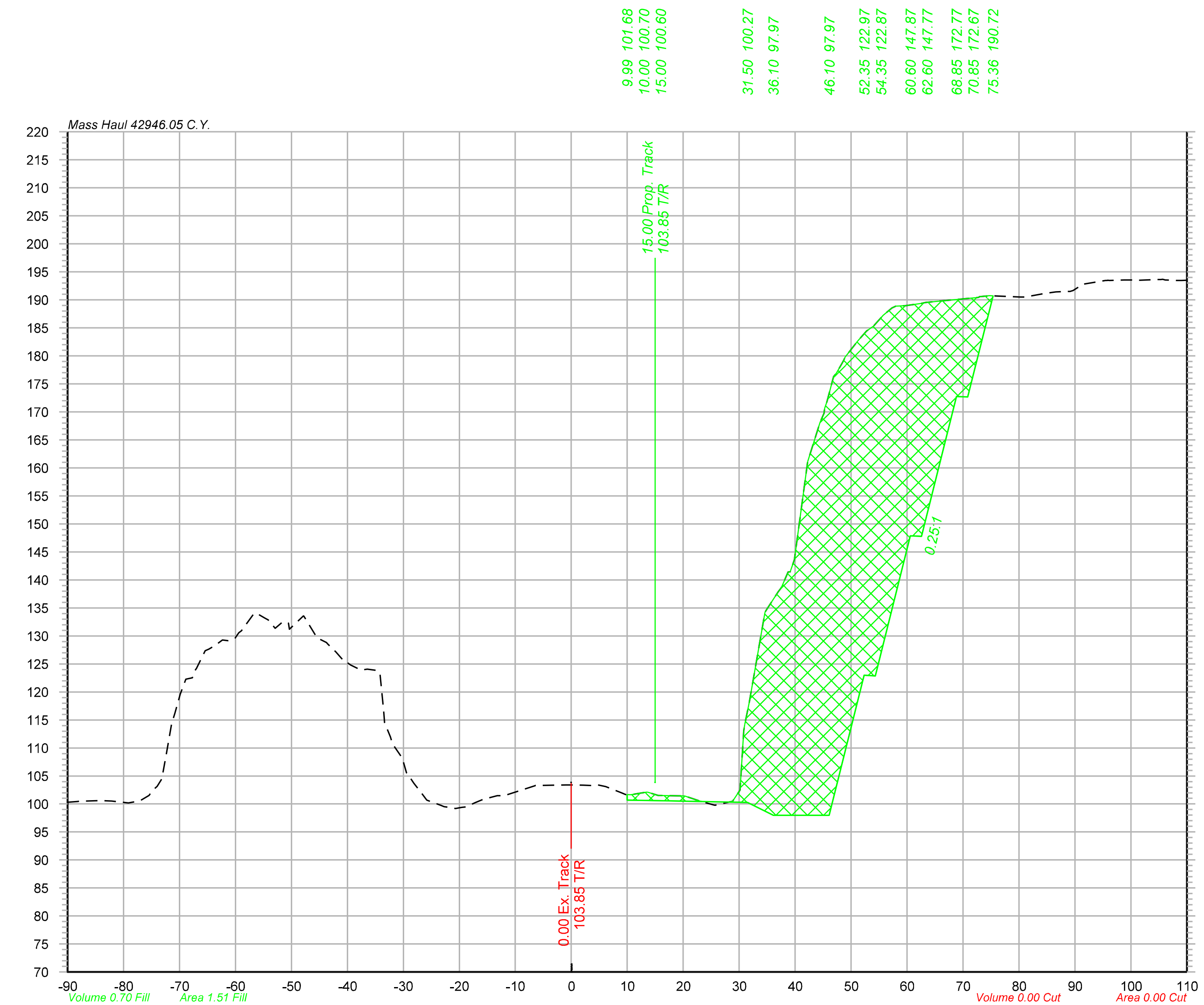
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1691+50

Offset	Elevation
-90.00	120.63
-86.74	132.87
-83.65	143.72
-79.92	152.20
-76.32	156.19
-72.96	166.85
-69.38	163.88
-65.01	164.68
-60.52	170.15
-56.56	171.15
-53.31	167.68
-49.82	164.49
-46.24	153.94
-42.56	153.49
-38.22	138.67
-33.91	123.45
-30.90	115.55
-26.71	108.64
-23.09	101.71
-19.15	99.55
-15.45	100.70
-12.15	101.51
-8.58	102.50
-5.36	103.33
-0.29	103.28
4.67	103.43
7.91	102.50
11.12	101.77
15.01	101.54
18.85	101.44
22.88	100.51
26.60	100.44
30.08	114.52
33.51	129.70
37.32	139.68
40.71	158.11
44.65	174.29
47.83	181.98
51.29	185.36
54.98	187.92
60.04	189.02
63.85	189.28
70.99	189.46
74.34	189.25
79.77	189.29
83.88	189.66
89.72	190.31
93.11	190.59
96.68	190.63
101.22	190.95
106.88	191.24
110.00	191.46



1691+75

Offset	Elevation
-90.00	100.33
-86.68	100.50
-82.13	100.51
-79.12	100.18
-75.45	101.52
-72.34	109.08
-68.88	122.30
-65.41	127.37
-62.31	129.27
-58.93	130.91
-54.71	133.17
-51.51	132.59
-47.93	133.52
-43.74	128.82
-40.51	125.39
-36.44	124.08
-33.36	114.52
-30.20	108.19
-26.69	101.87
-23.24	99.74
-19.57	99.40
-15.78	100.82
-12.04	101.49
-6.44	103.29
-0.94	103.38
2.15	103.36
6.16	103.09
9.70	101.71
13.40	102.10
17.50	101.50
23.11	100.50
28.82	100.47
31.82	118.24
35.12	135.04
38.74	141.42
42.00	159.28
45.15	169.75
48.30	178.52
52.73	184.44
55.74	187.27
59.77	188.95
63.19	189.51
72.65	190.42
76.41	190.69
80.30	190.50
84.52	191.12
88.59	191.49
95.48	193.47
98.82	193.55
104.73	193.61
108.16	193.47

Legend

Assumed Rock Excavation

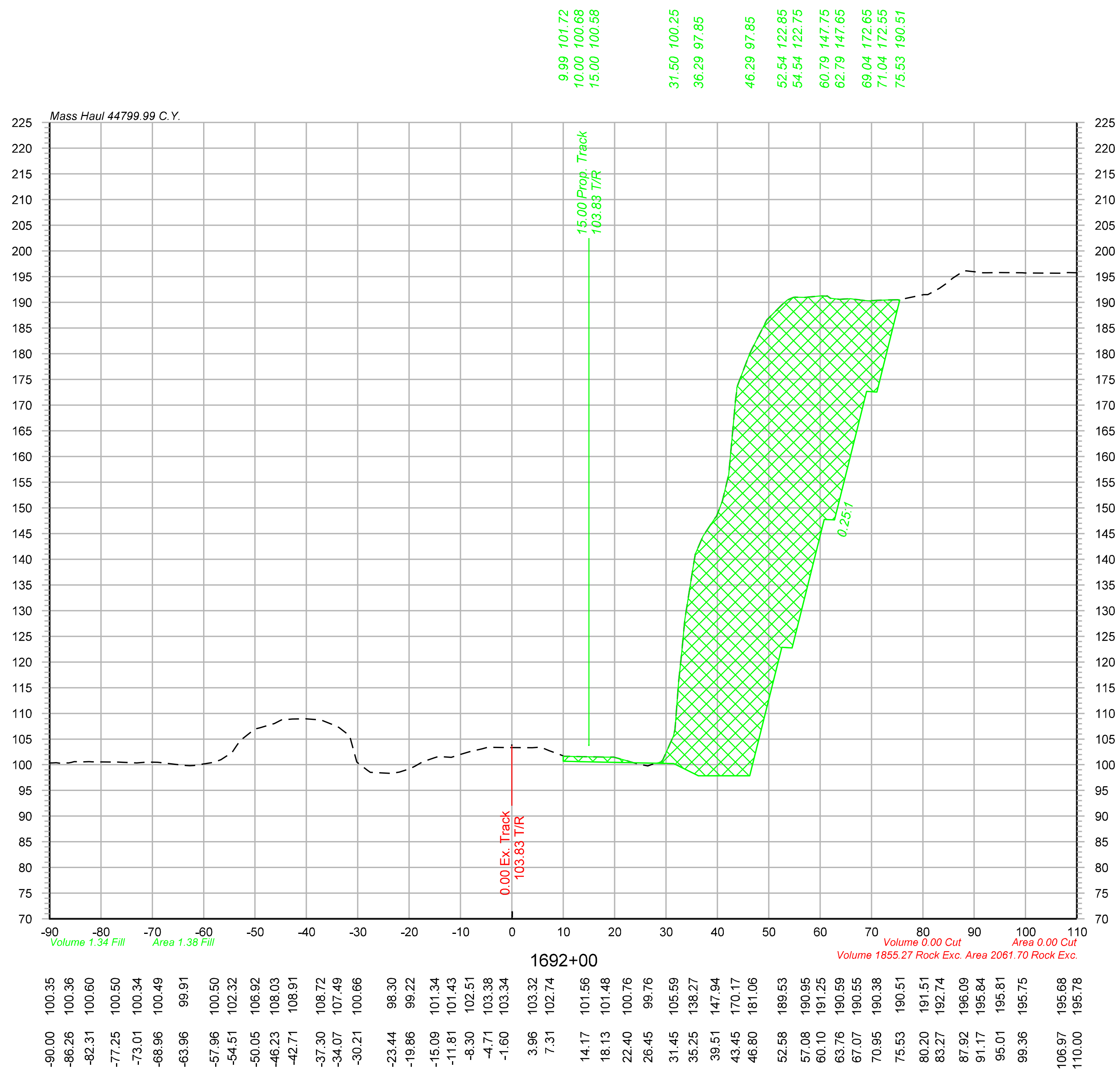
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 098 of 139

UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1691+50 TO STA.1691+75



Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 099 of 139

UNION PACIFIC RAILROAD

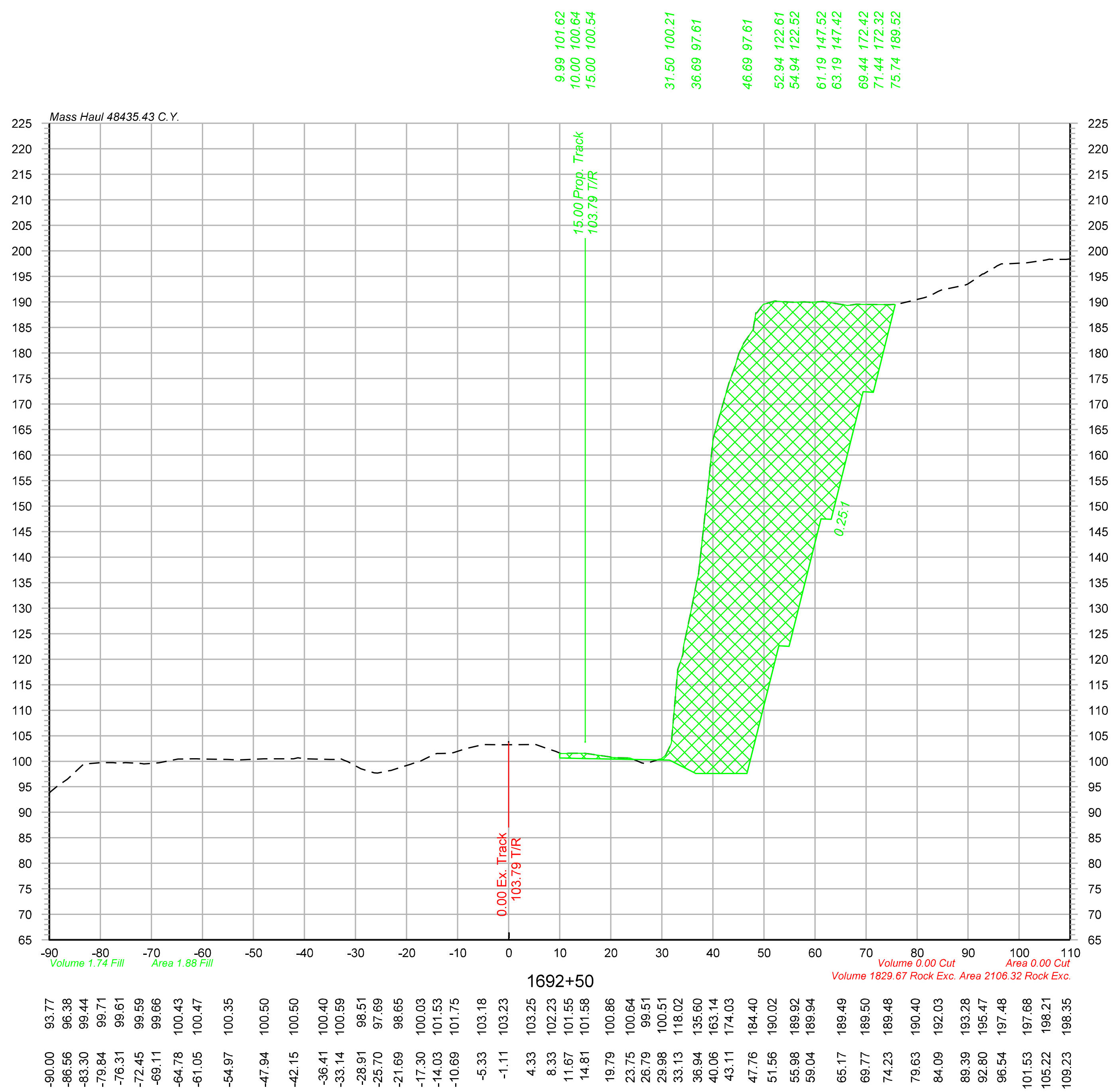
Office of Assistant Vice President
Engineering Design/Construction

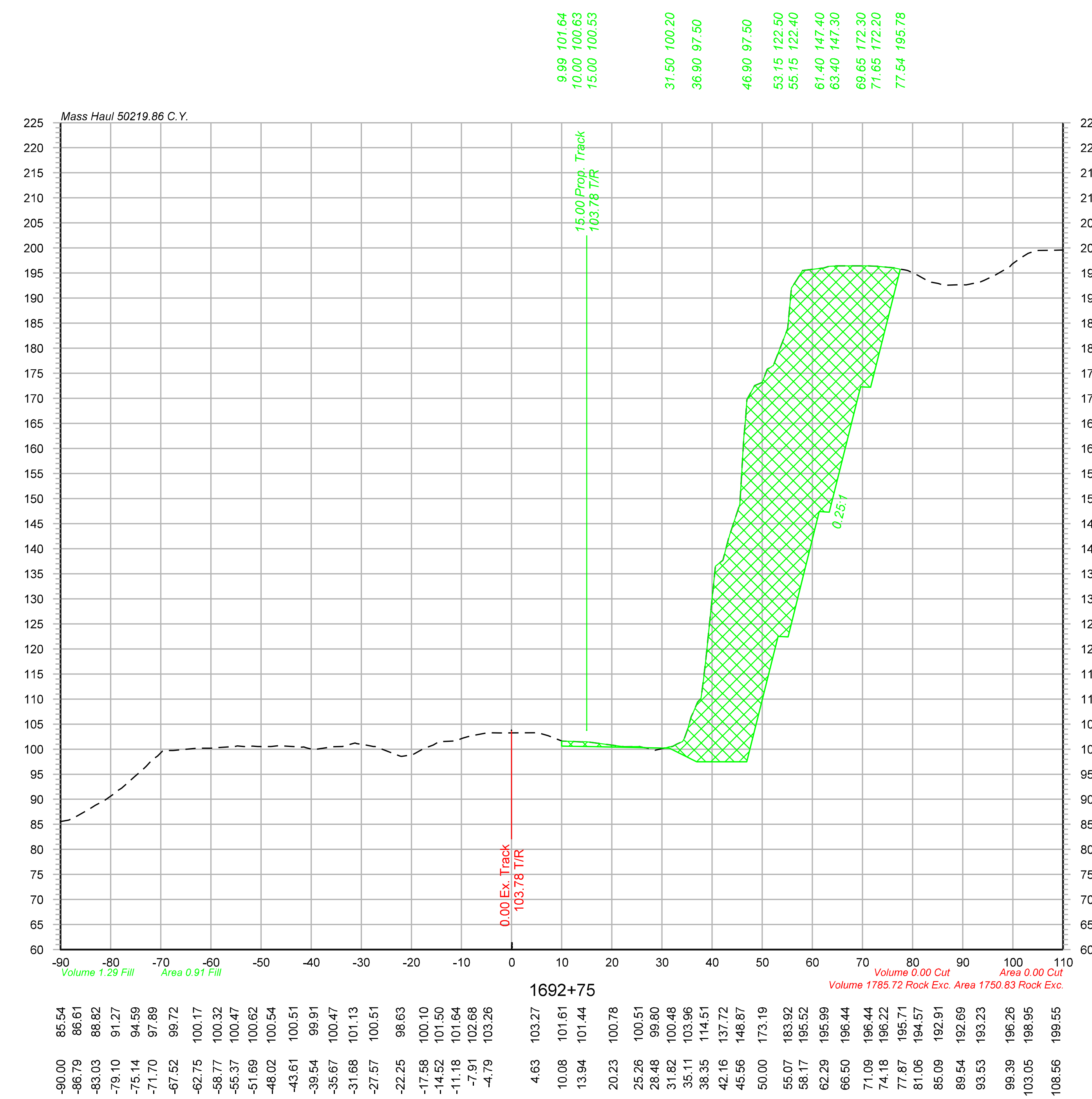
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1692+00 TO STA.1692+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



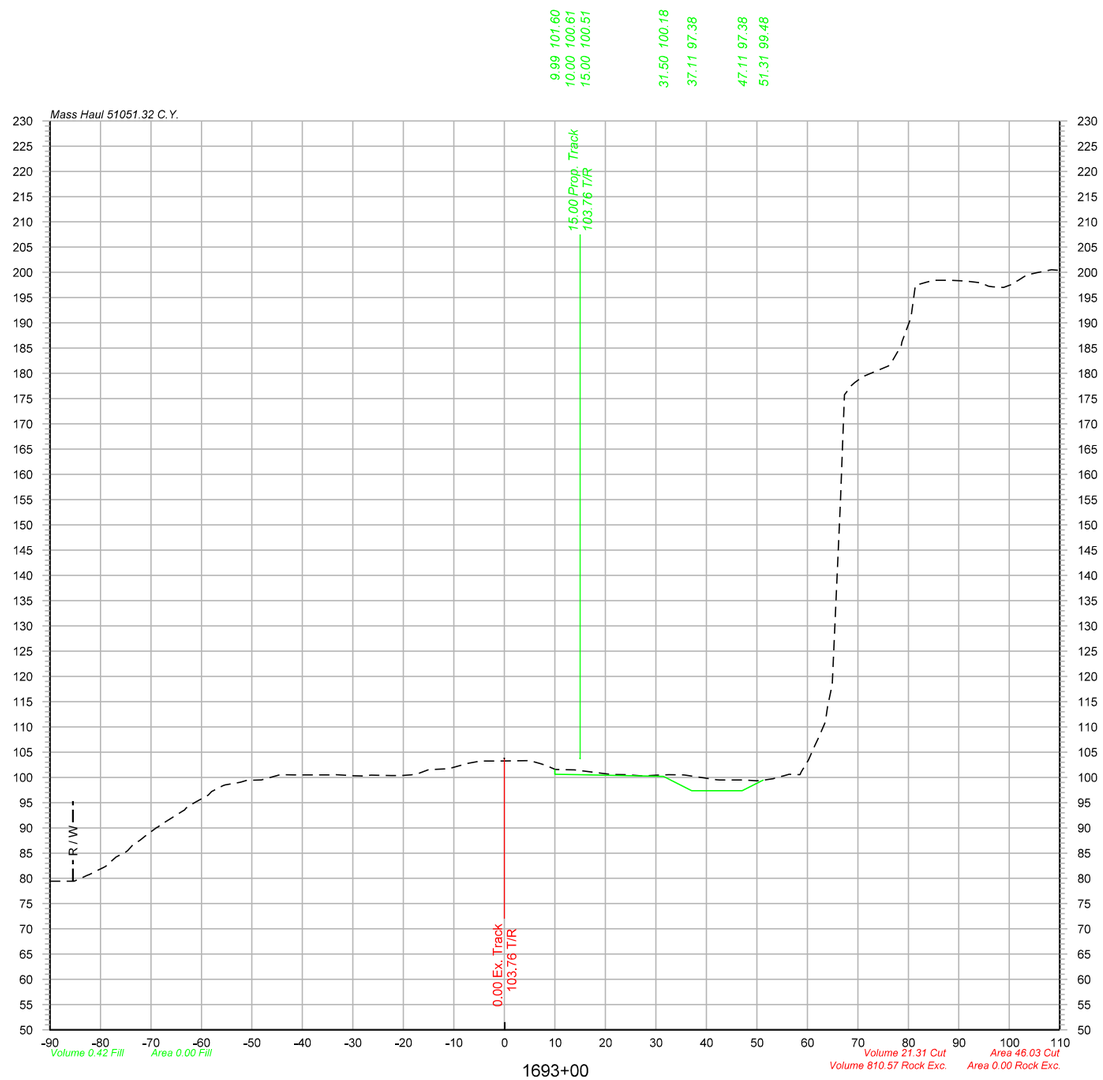


Legend

Assumed Rock Excavation

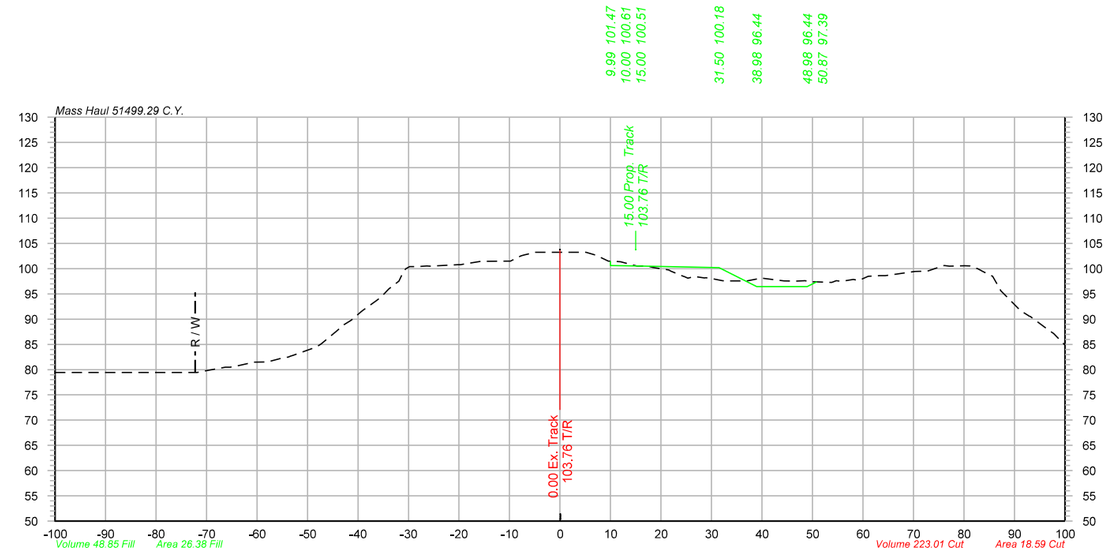
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 100 of 139	SHEET TITLE: CROSS SECTIONS STA.1692+50 TO STA.1692+75



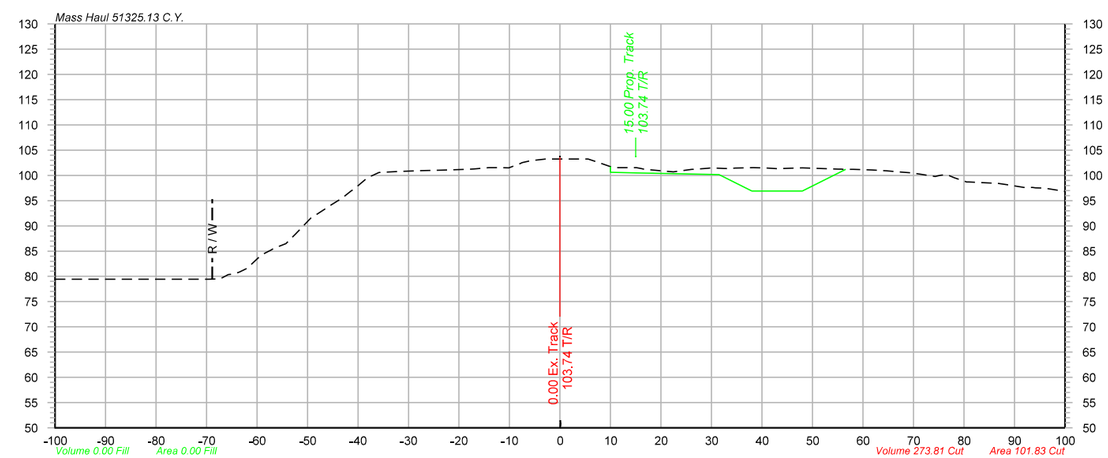
1693+00

-90.00	79.42
-86.36	79.42
-82.60	80.59
-79.17	82.29
-75.04	85.18
-71.11	88.41
-67.18	91.16
-63.73	93.33
-58.64	96.48
-55.35	98.49
-52.31	99.03
-48.37	98.47
-45.31	100.29
-41.74	100.48
-34.75	100.50
-29.77	100.32
-26.40	100.44
-22.39	100.36
-18.64	100.50
-15.00	101.52
-11.38	101.69
-7.22	102.78
-0.94	103.25
5.00	103.30
8.11	102.41
11.46	101.53
20.56	100.66
24.29	100.53
27.39	100.27
31.61	100.50
35.48	100.50
42.01	99.53
46.02	99.47
50.02	99.33
53.26	99.75
56.39	100.61
60.21	103.45
63.55	110.94
67.37	175.77
70.63	179.11
76.07	181.48
80.52	191.07
85.01	198.44
88.33	198.43
91.37	198.29
94.38	197.92
98.85	197.01
103.01	199.24
107.91	200.43



1695+00

-100.00	79.42
-93.08	79.42
-72.14	79.42
-66.27	80.47
-60.60	81.47
-54.78	82.36
-48.25	84.50
-44.30	87.55
-39.60	91.27
-36.33	93.70
-31.91	97.52
-28.20	100.41
-20.22	100.77
-15.68	101.45
-10.33	101.48
-7.12	102.69
-2.09	103.24
5.16	103.25
8.36	102.09
12.00	101.36
15.19	100.53
18.40	100.25
21.54	99.75
24.58	98.44
28.60	98.17
32.16	97.59
35.59	97.58
39.14	97.99
44.35	97.58
48.59	97.62
53.57	97.28
58.08	97.85
63.34	98.59
66.55	98.92
70.28	99.44
75.65	100.47
80.12	100.56
83.80	99.39
87.13	95.94
91.19	91.70
96.73	87.84
100.00	84.85



1694+00

-100.00	79.42
-69.67	79.42
-65.71	80.36
-62.28	81.43
-59.22	84.19
-54.29	86.46
-49.42	91.47
-46.30	93.52
-42.92	95.70
-38.20	99.49
-32.63	100.73
-27.32	100.95
-23.59	101.01
-18.64	101.19
-14.10	101.52
-10.14	101.50
-6.92	102.64
-2.85	103.22
1.39	103.24
5.59	103.24
10.57	101.53
15.17	101.54
22.43	100.69
26.12	101.18
29.25	101.40
32.53	101.38
38.24	101.51
43.06	101.31
46.37	101.44
54.01	101.29
58.08	101.18
61.74	101.07
67.56	100.67
71.09	100.28
74.32	99.78
78.08	99.53
84.29	98.52
88.82	98.11
91.88	97.63
95.89	97.46
100.00	96.83

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

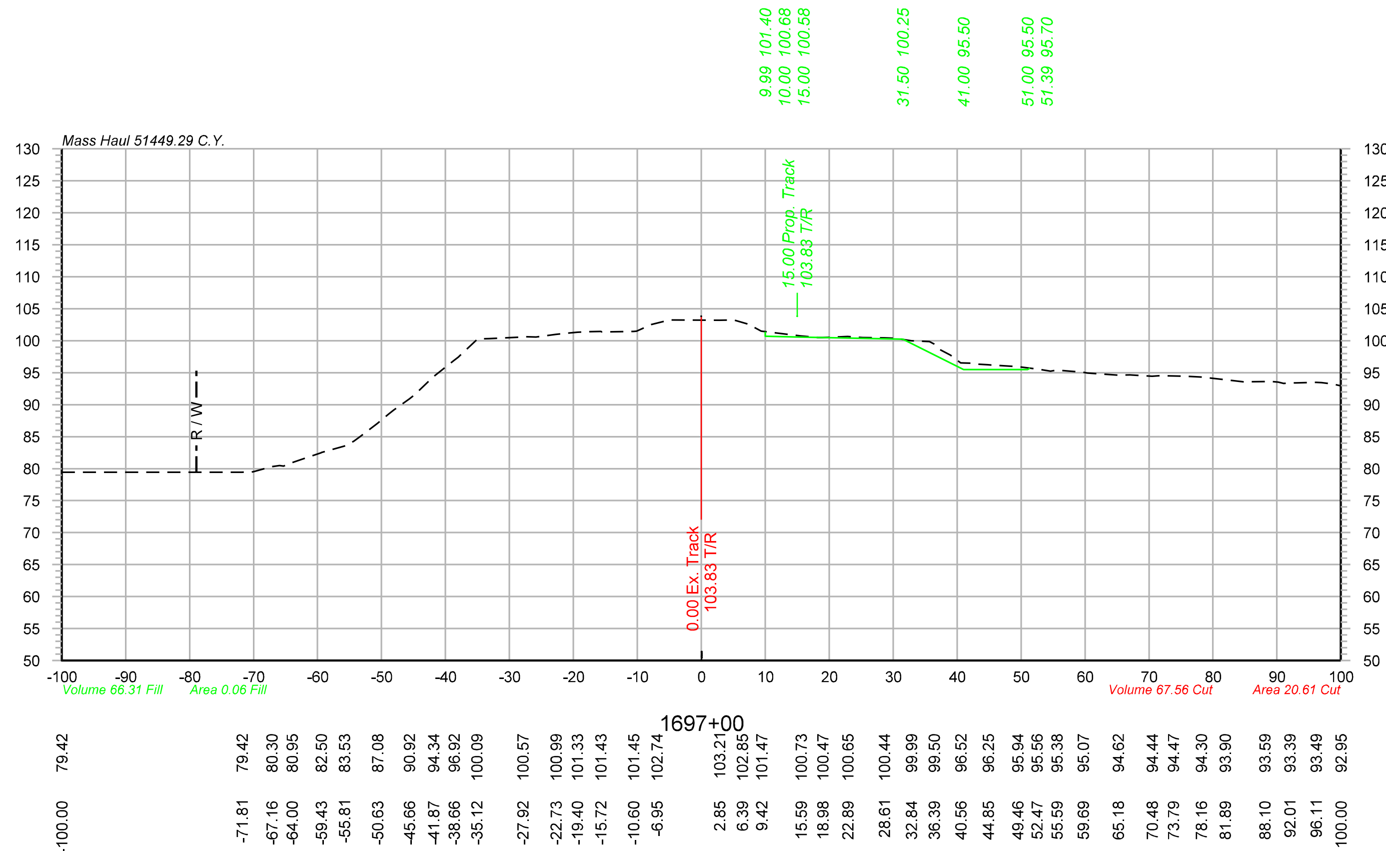
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 101 of 139

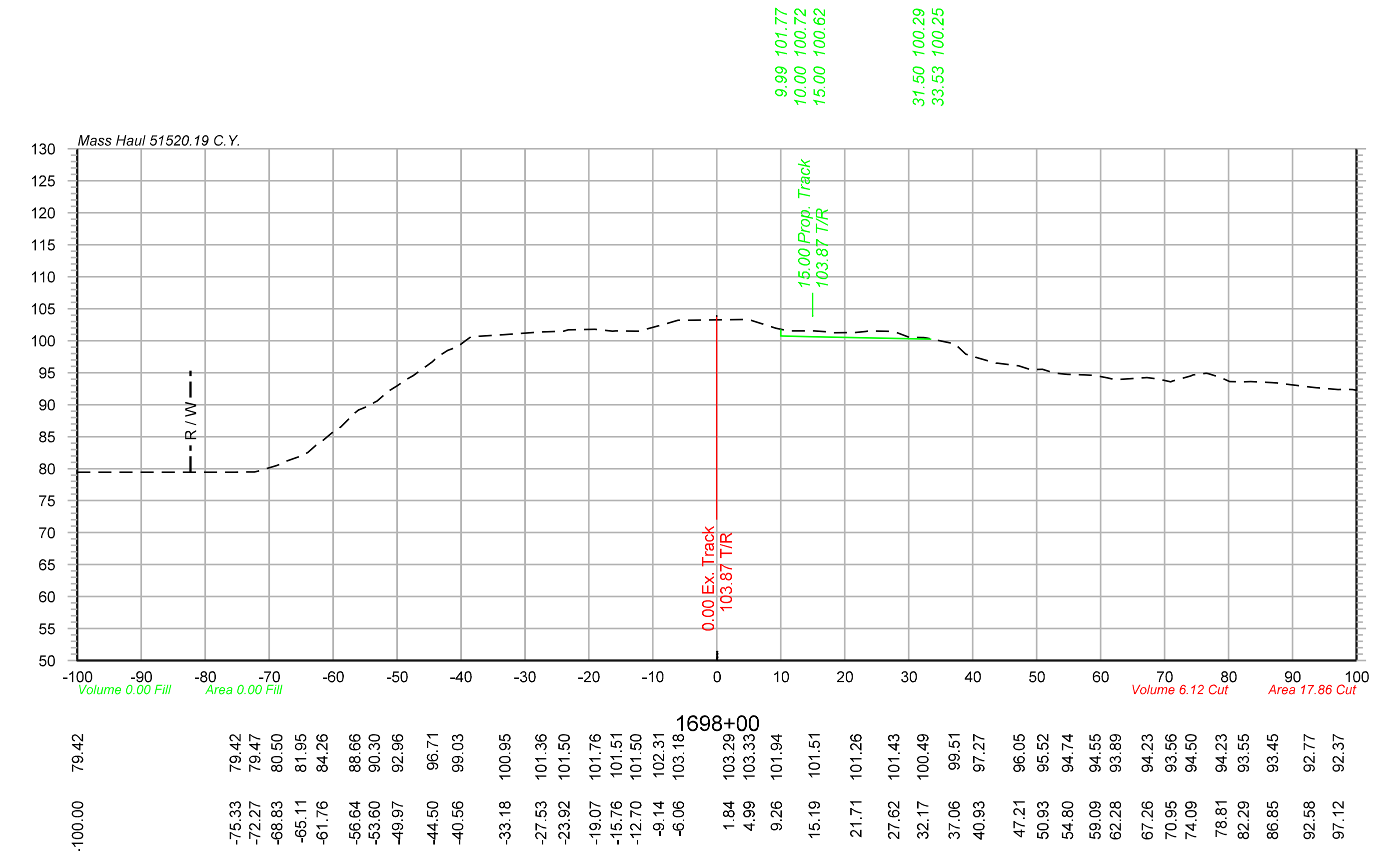
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

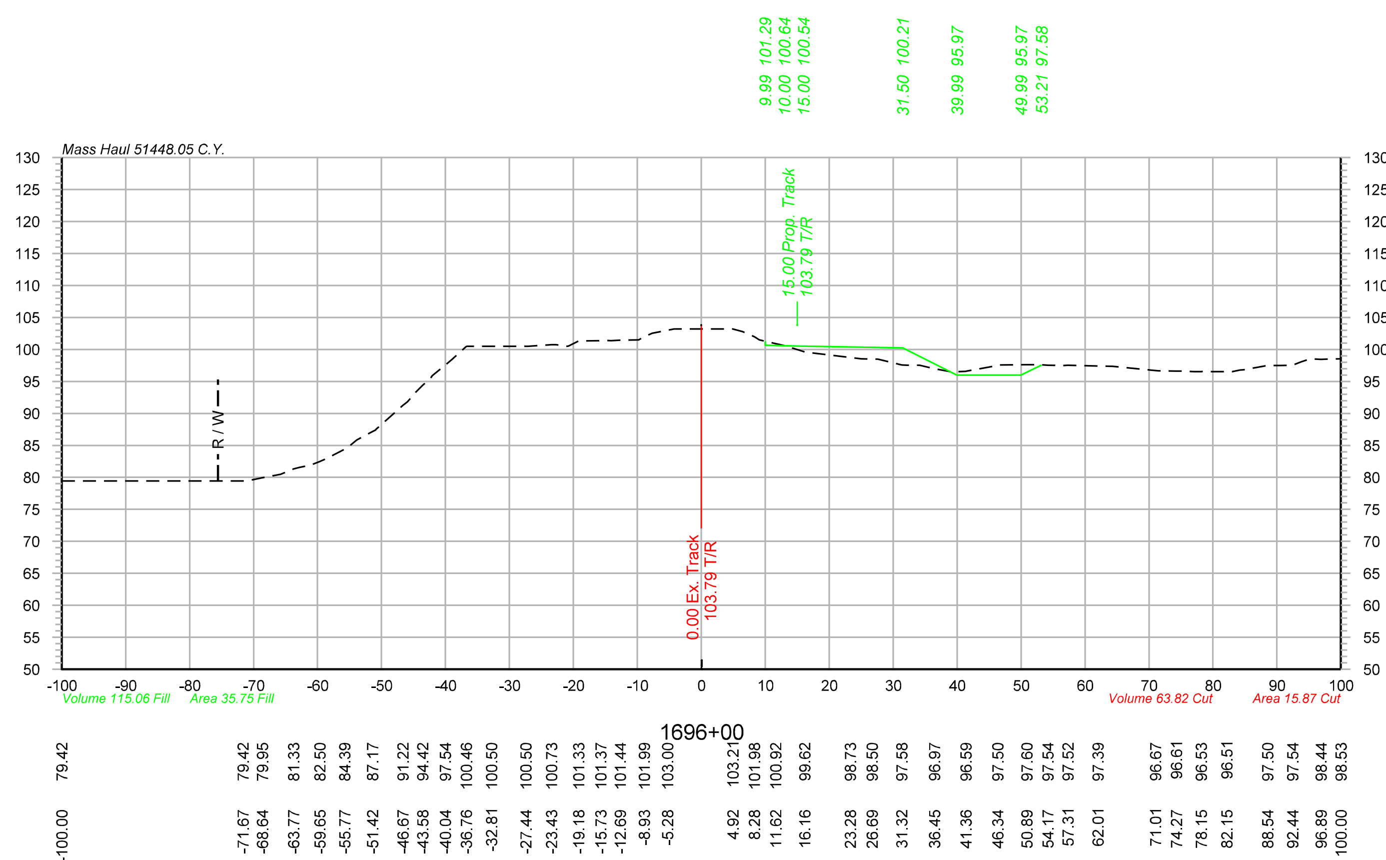
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

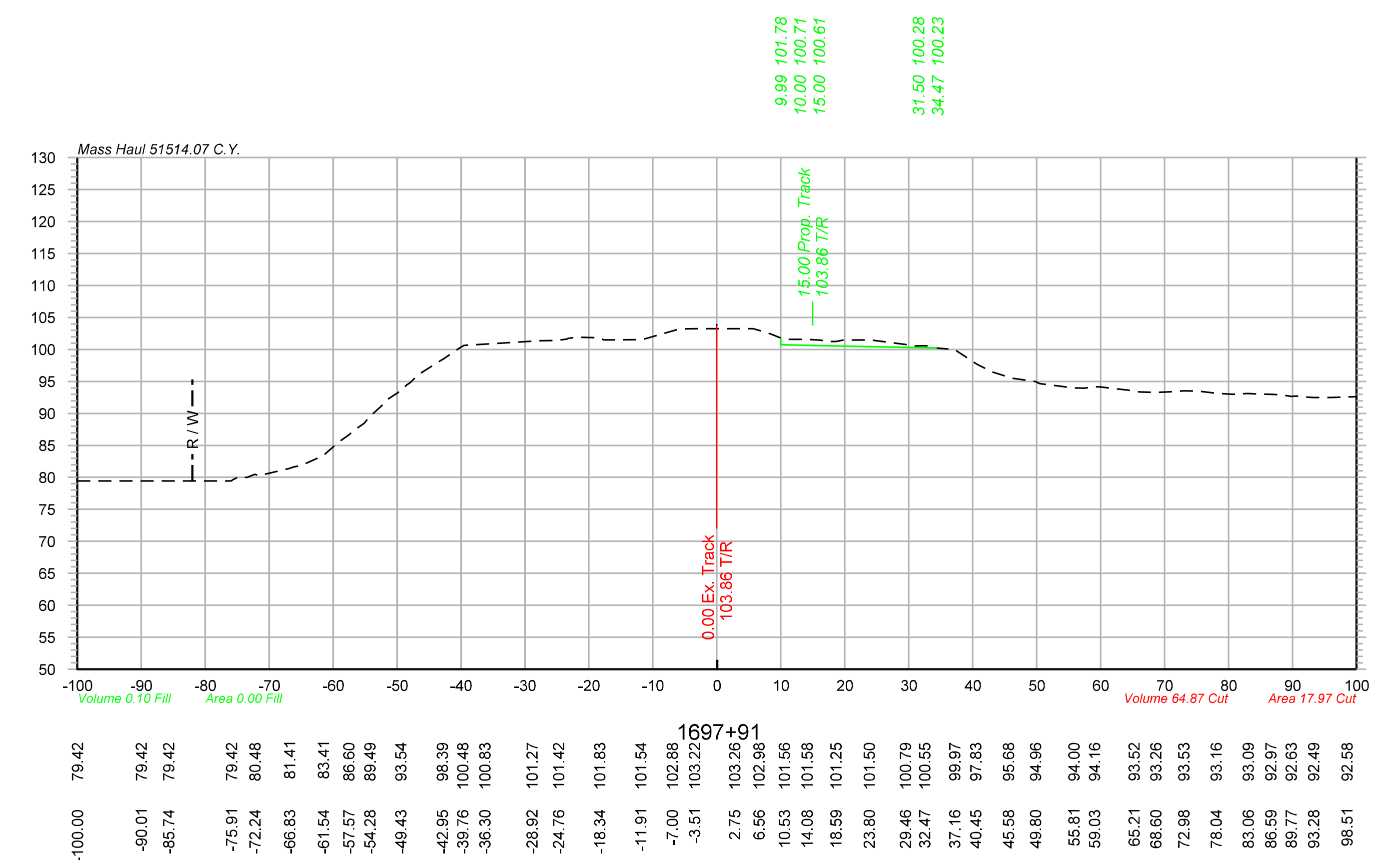
SHEET TITLE:
CROSS SECTIONS STA.1693+00 TO STA.1695+00

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omhq5573\wpsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014







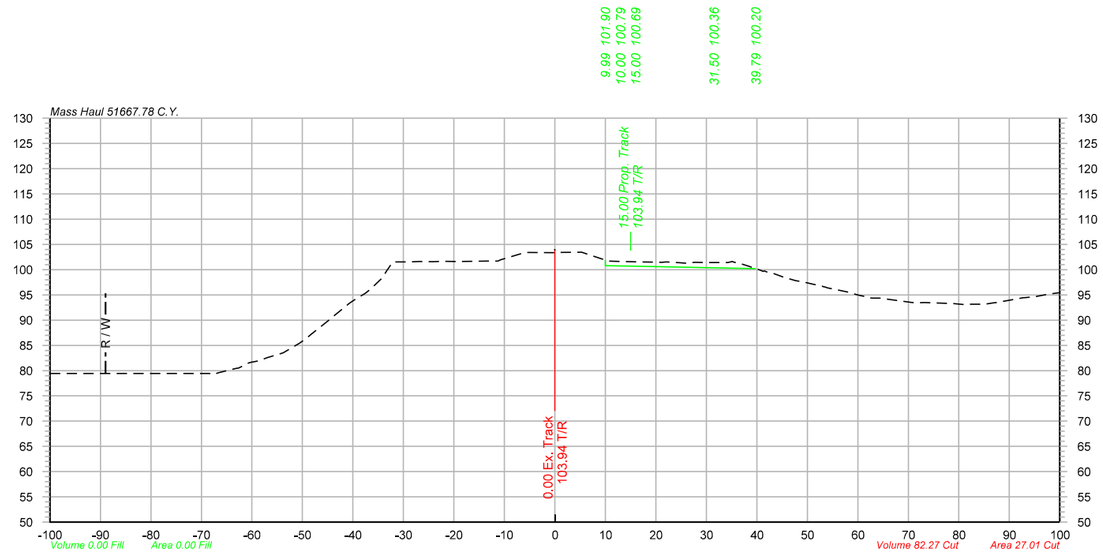


Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES

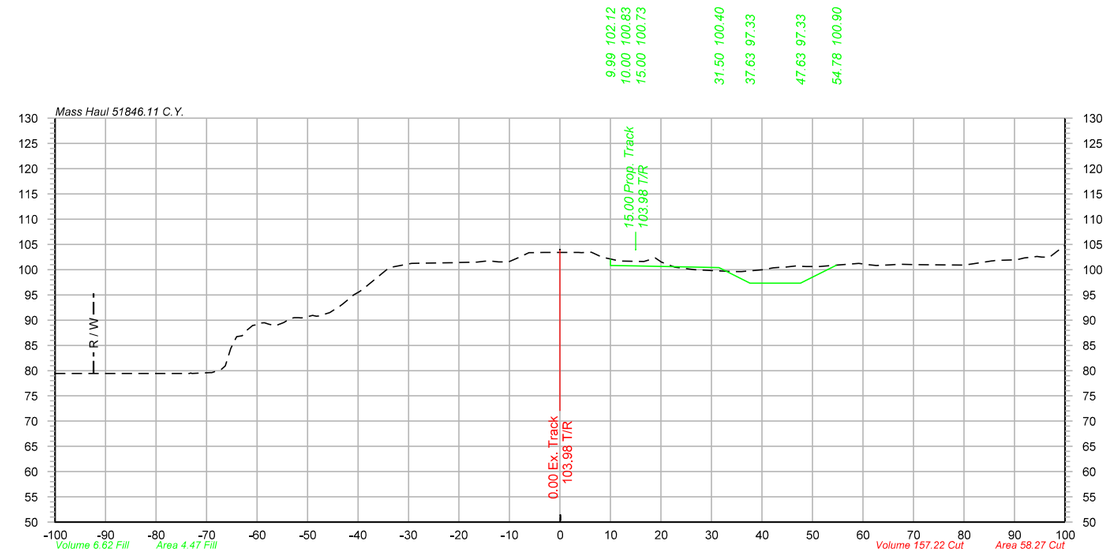
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 102 of 139	SHEET TITLE: CROSS SECTIONS STA.1696+00 TO STA.1698+00



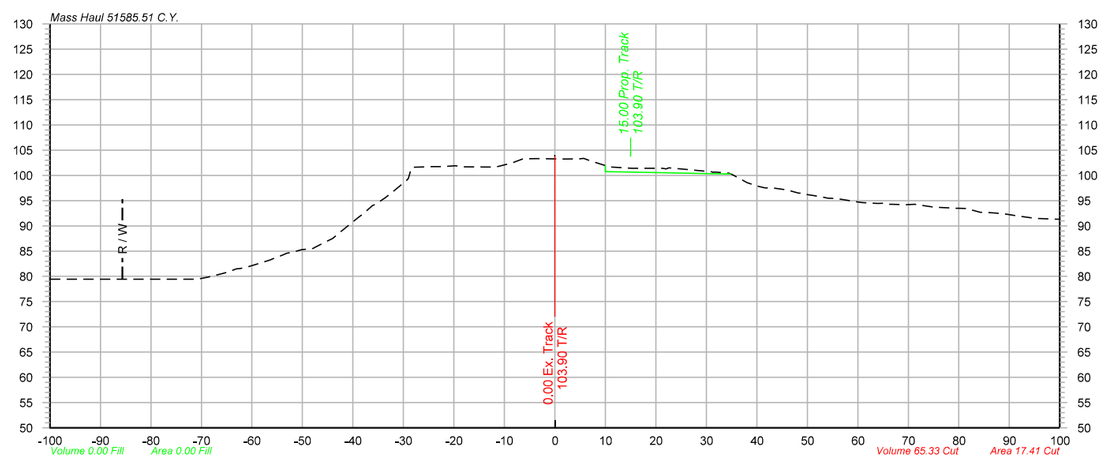
1700+00

79.42	-100.00
79.42	-72.38
79.42	-69.34
79.71	-66.01
80.52	-62.59
81.95	-58.64
83.51	-53.80
85.46	-50.55
89.47	-45.40
93.30	-40.70
95.26	-37.59
98.49	-34.04
101.54	-28.81
101.58	-24.09
101.62	-19.75
101.71	-13.34
103.38	-5.88
103.38	-0.70
103.43	5.34
101.78	10.35
101.51	16.64
101.45	21.18
101.34	24.79
101.42	29.85
101.39	34.26
100.71	38.35
99.72	41.51
98.50	45.36
97.56	49.20
96.72	52.89
95.51	58.17
94.66	61.58
93.50	70.78
93.27	78.96
93.15	82.36
93.45	86.97
94.29	91.89
95.16	97.78



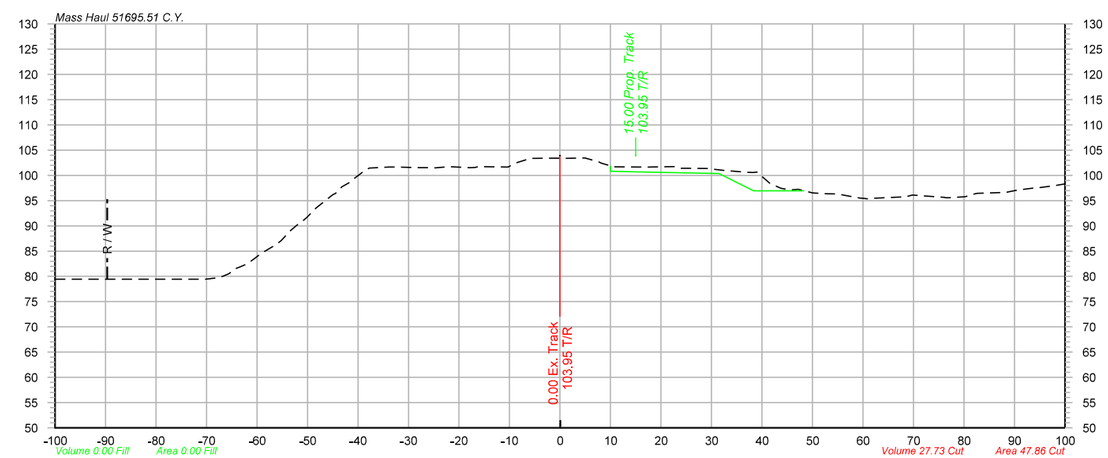
1701+00

79.42	-100.00
79.42	-75.40
79.59	-69.36
80.94	-66.30
86.91	-62.96
89.41	-59.72
88.90	-56.34
90.50	-52.66
90.94	-49.00
91.48	-45.63
93.75	-42.38
96.07	-39.11
99.48	-34.94
101.25	-29.40
101.33	-24.56
101.38	-21.36
101.49	-16.45
101.52	-12.12
102.50	-7.98
103.41	-3.19
103.41	1.00
103.38	4.25
102.50	8.28
101.72	11.79
101.60	16.61
101.54	20.02
100.34	23.73
99.91	28.33
99.64	33.38
100.00	40.23
100.50	44.01
100.63	48.69
100.75	52.84
101.24	59.18
100.82	62.62
101.08	67.24
101.00	70.46
100.88	79.77
101.49	84.00
101.96	90.44
102.62	94.49
104.82	100.00



1699+00

79.42	-100.00
79.42	-93.73
79.42	-71.53
79.90	-68.49
80.87	-64.78
81.90	-60.78
83.24	-56.44
84.55	-53.14
85.33	-50.04
86.56	-45.94
88.52	-42.82
91.55	-39.04
94.31	-35.47
96.82	-32.02
99.40	-29.00
101.71	-25.21
101.73	-22.17
101.70	-18.04
101.67	-13.63
102.50	-8.40
103.30	-3.55
103.22	1.84
103.30	4.92
101.75	10.63
101.41	15.21
101.41	20.49
101.07	27.20
100.70	31.14
100.45	34.30
98.80	37.61
97.51	41.56
97.10	46.02
96.32	49.17
95.65	53.27
94.72	59.99
94.45	63.94
94.21	69.54
93.84	74.00
93.56	78.01
93.45	81.50
92.64	85.74
91.97	91.55
91.48	95.14
91.31	99.58



1700+20

79.42	-100.00
79.42	-71.82
79.79	-67.43
81.48	-64.39
83.57	-60.47
86.19	-56.43
90.05	-52.19
93.53	-48.31
95.97	-45.22
98.59	-41.66
101.45	-37.78
101.63	-34.60
101.63	-30.94
101.51	-27.64
101.65	-22.77
101.57	-18.77
101.70	-13.51
101.65	-10.26
103.37	-5.84
103.38	-1.56
103.44	4.94
102.40	8.23
101.65	15.63
101.74	22.57
101.36	29.17
100.97	32.40
100.62	37.05
98.46	41.52
97.09	45.54
96.52	49.99
96.30	54.97
95.49	59.50
95.74	67.87
95.95	71.94
95.65	76.11
95.76	80.26
96.60	87.69
97.49	93.77
98.04	98.35

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 103 of 139

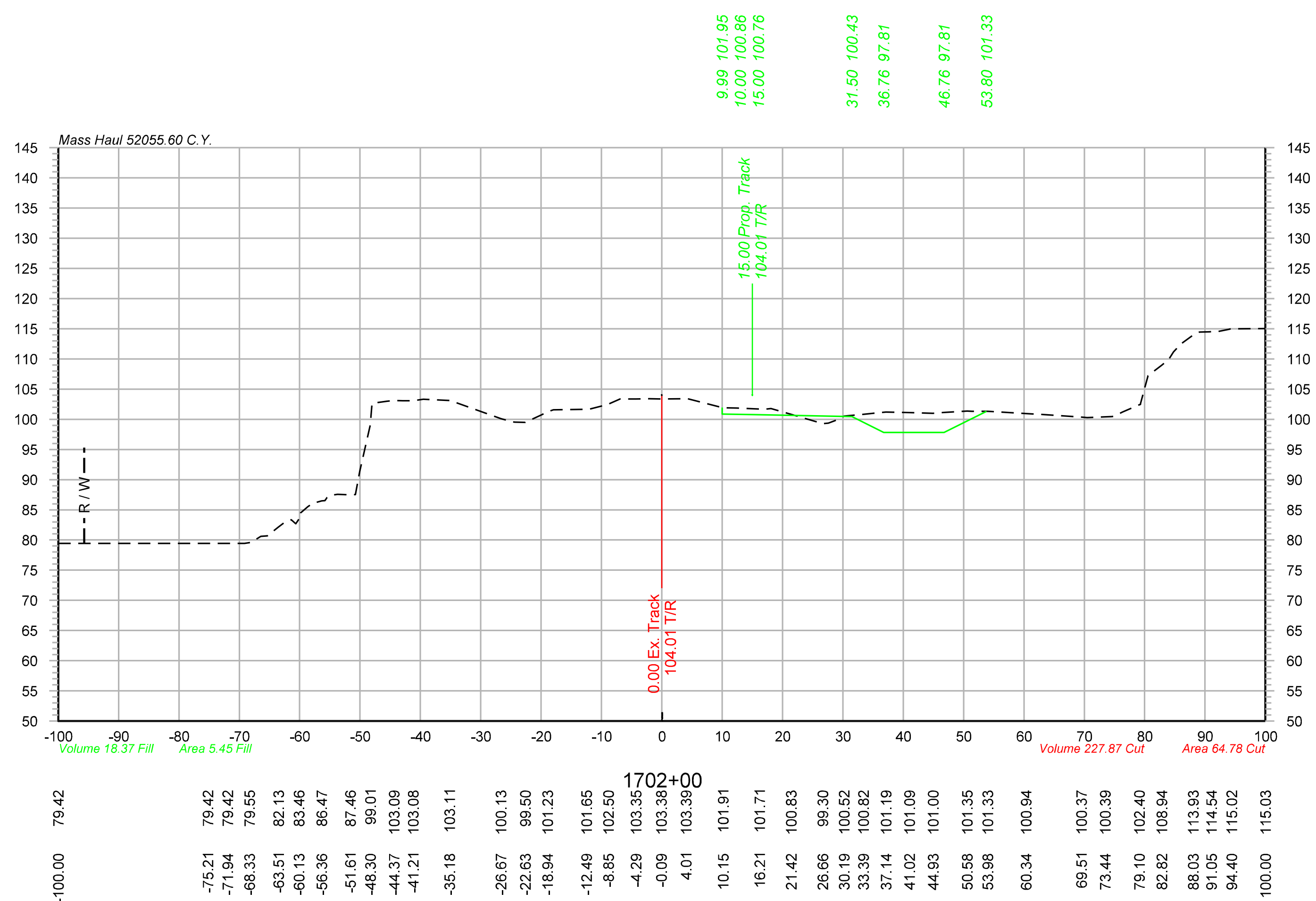
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

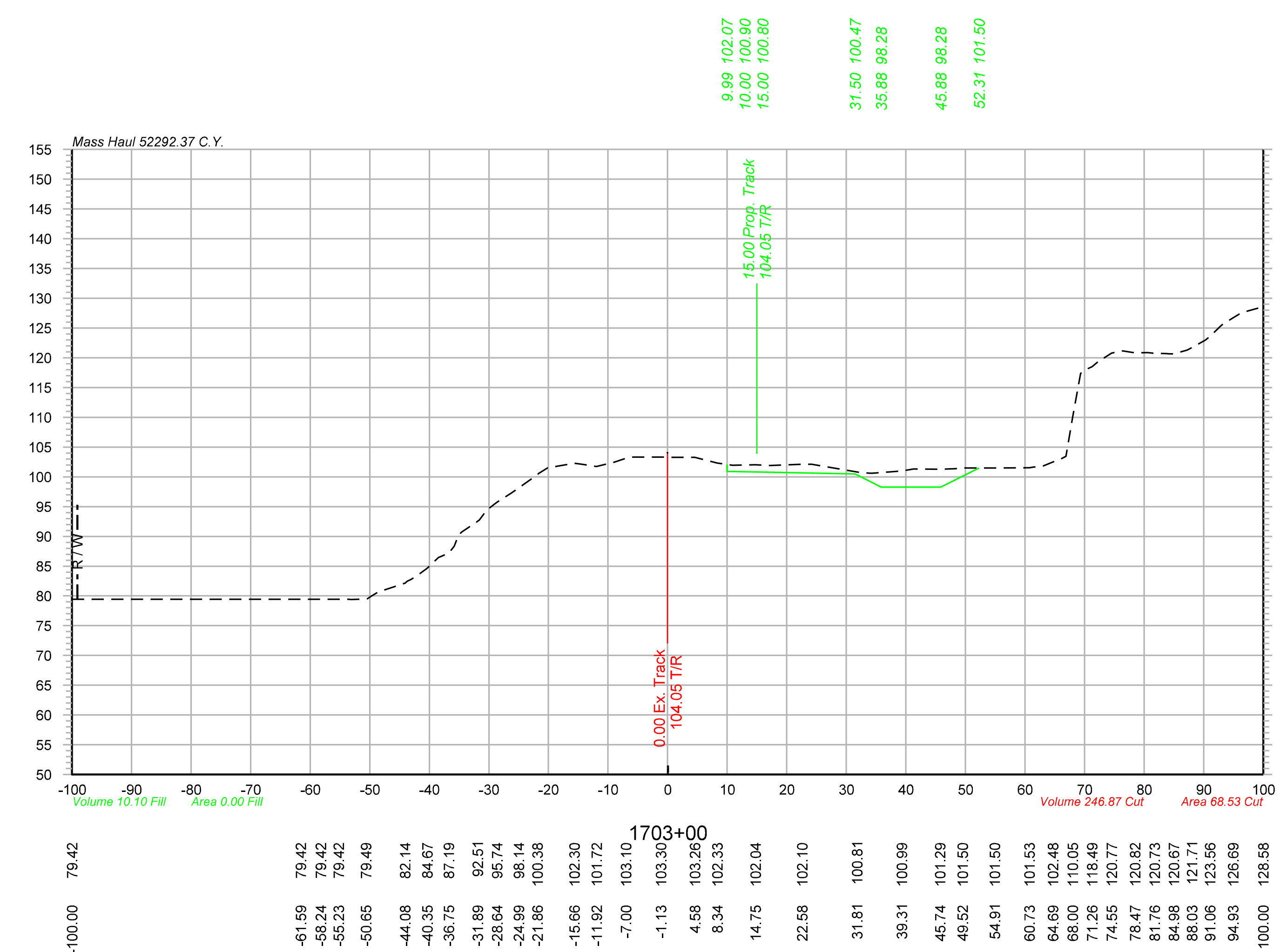
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1699+00 TO STA.1701+00

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omhq5573\wpsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



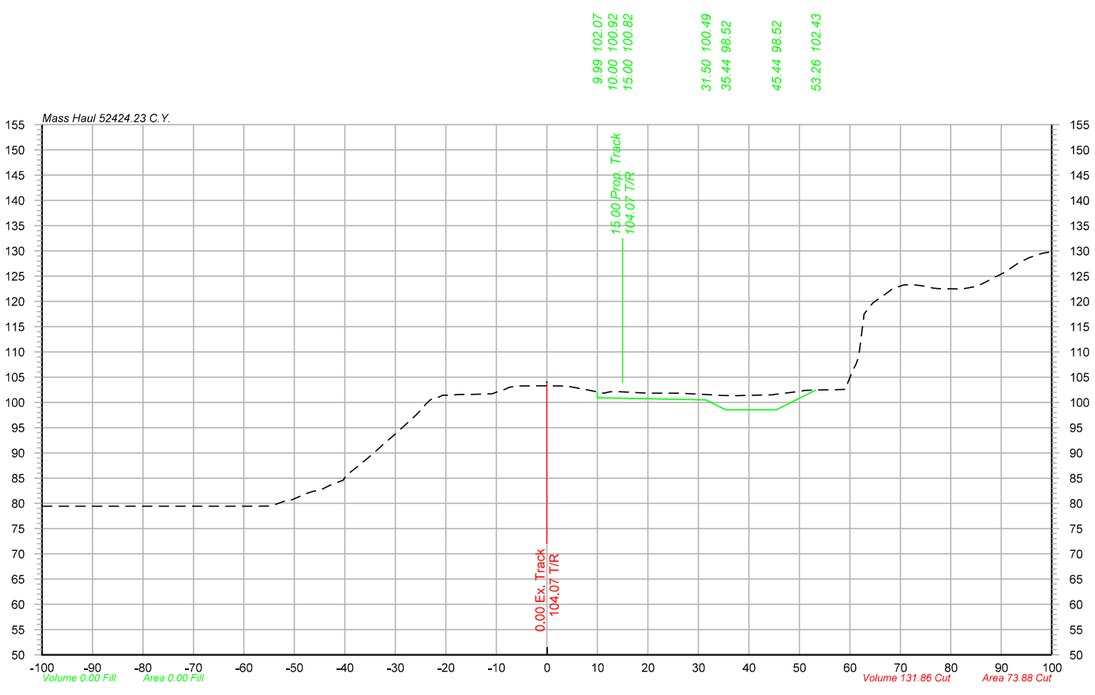


OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

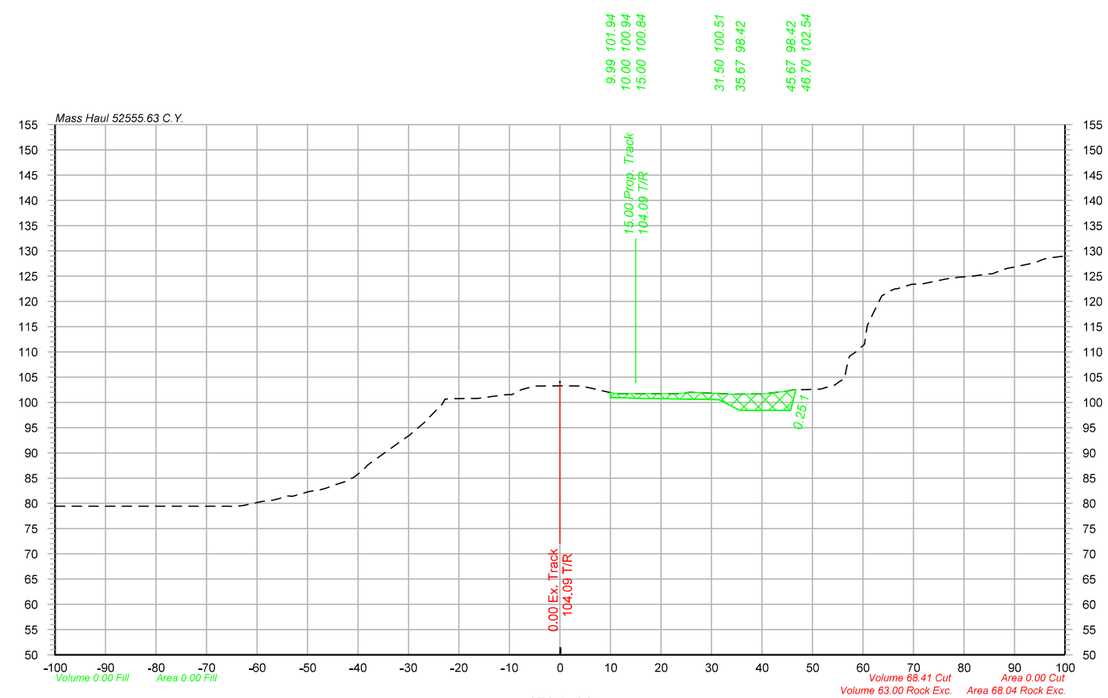
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 104 of 139	SHEET TITLE: CROSS SECTIONS STA.1702+00 TO STA.1703+00



1703+50

-100.00	79.42
-59.02	79.42
-54.62	79.46
-51.51	80.52
-47.53	81.99
-42.64	83.71
-37.54	87.24
-33.48	90.70
-30.34	93.43
-25.99	97.39
-21.26	101.12
-17.47	101.58
-11.15	101.69
-7.44	102.98
-2.33	103.27
3.47	103.22
9.43	102.18
12.60	102.11
20.04	101.81
24.34	101.80
27.84	101.75
32.88	101.48
37.77	101.30
44.29	101.50
50.51	102.22
56.45	102.50
60.57	106.27
64.58	119.68
67.72	121.95
72.49	123.31
76.59	122.60
80.92	122.50
85.20	122.99
88.75	124.81
91.94	126.62
95.44	128.62
99.47	129.73



1704+00

-100.00	79.42
-96.55	79.42
-92.14	79.42
-88.85	79.42
-68.18	79.42
-64.97	79.41
-58.89	80.41
-53.85	81.49
-49.66	82.37
-46.52	82.93
-42.29	84.38
-38.79	86.86
-34.25	90.35
-30.04	93.34
-26.34	96.44
-23.26	99.69
-16.34	100.77
-11.67	101.39
-8.52	102.06
-4.63	103.25
0.41	103.27
3.83	103.22
10.84	101.75
16.48	101.71
23.42	101.70
31.16	101.77
37.70	101.63
45.35	102.29
51.52	102.61
54.55	103.47
58.39	109.83
63.73	121.09
66.82	122.49
71.93	123.50
76.54	124.43
81.94	125.05
85.58	125.44
88.61	126.55
93.28	127.50
96.93	128.53
100.00	128.96

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 105 of 139

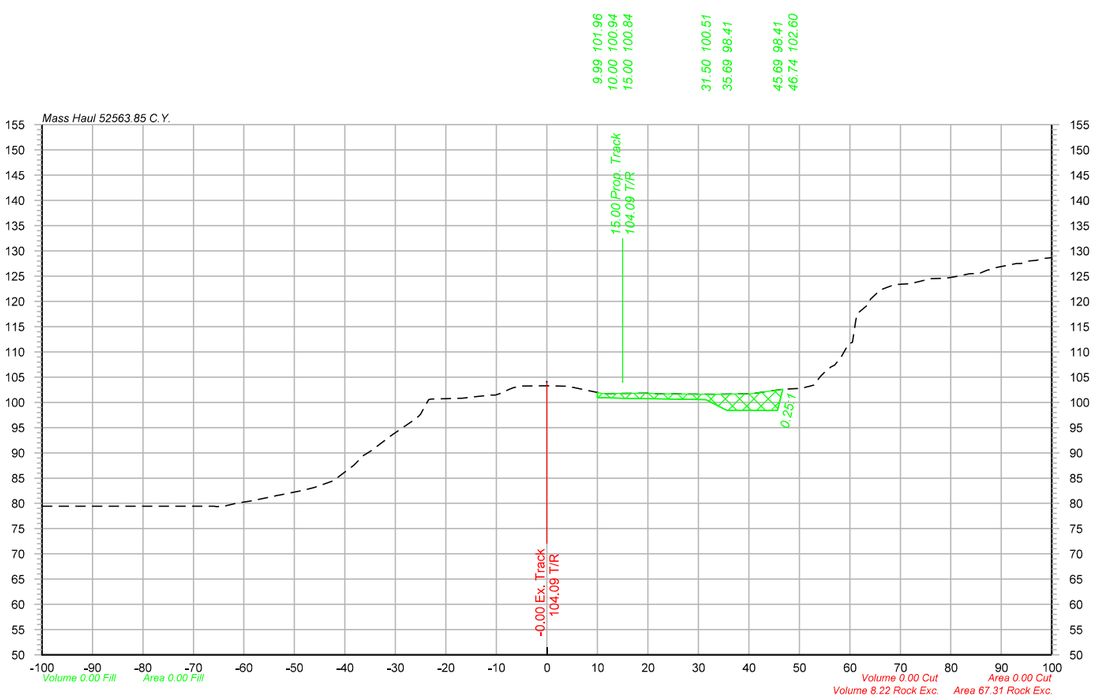
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

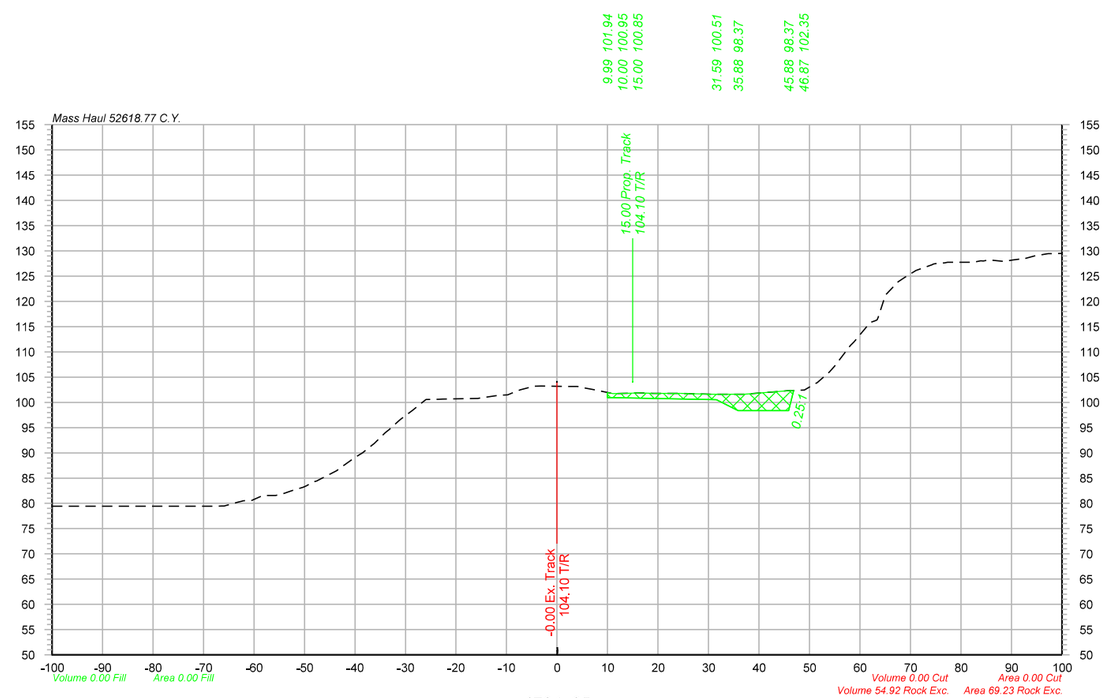
SHEET TITLE:
CROSS SECTIONS STA.1703+50 TO STA.1704+00

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\ipcm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1704+03

-100.00	79.42
-66.09	79.42
-61.31	80.06
-53.92	81.46
-48.37	82.57
-42.86	84.27
-38.26	87.53
-34.65	90.50
-30.82	93.43
-26.44	96.42
-23.43	100.54
-19.73	100.75
-16.73	100.81
-11.07	101.43
-7.60	102.54
-0.58	103.27
4.10	103.19
8.66	102.23
19.86	101.80
23.18	101.67
26.55	101.64
33.15	101.60
39.65	101.67
46.47	102.58
49.95	102.72
53.21	103.87
56.28	107.04
59.74	111.51
63.23	119.05
66.52	122.43
71.11	123.46
76.02	124.48
81.24	124.96
85.55	125.49
90.69	127.02
93.91	127.50
96.92	128.13
100.00	128.66



1704+25

-100.00	79.42
-96.04	79.42
-85.41	79.42
-67.30	79.42
-63.07	80.27
-58.25	81.55
-54.42	81.84
-50.30	83.19
-46.95	84.75
-43.61	86.50
-40.00	89.11
-36.18	91.85
-31.37	96.31
-26.72	99.94
-23.40	100.61
-15.84	100.78
-11.51	101.39
-8.07	102.17
-4.61	103.21
2.01	103.16
5.19	102.91
11.06	101.72
14.94	101.83
18.96	101.79
23.32	101.77
30.52	101.62
37.08	101.63
44.93	102.25
48.99	102.45
53.94	106.04
58.10	111.25
61.32	114.97
65.04	121.23
68.17	124.30
74.24	127.26
77.36	127.74
81.70	127.75
85.74	128.23
90.32	128.20
94.55	129.00
98.22	129.45

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 106 of 139

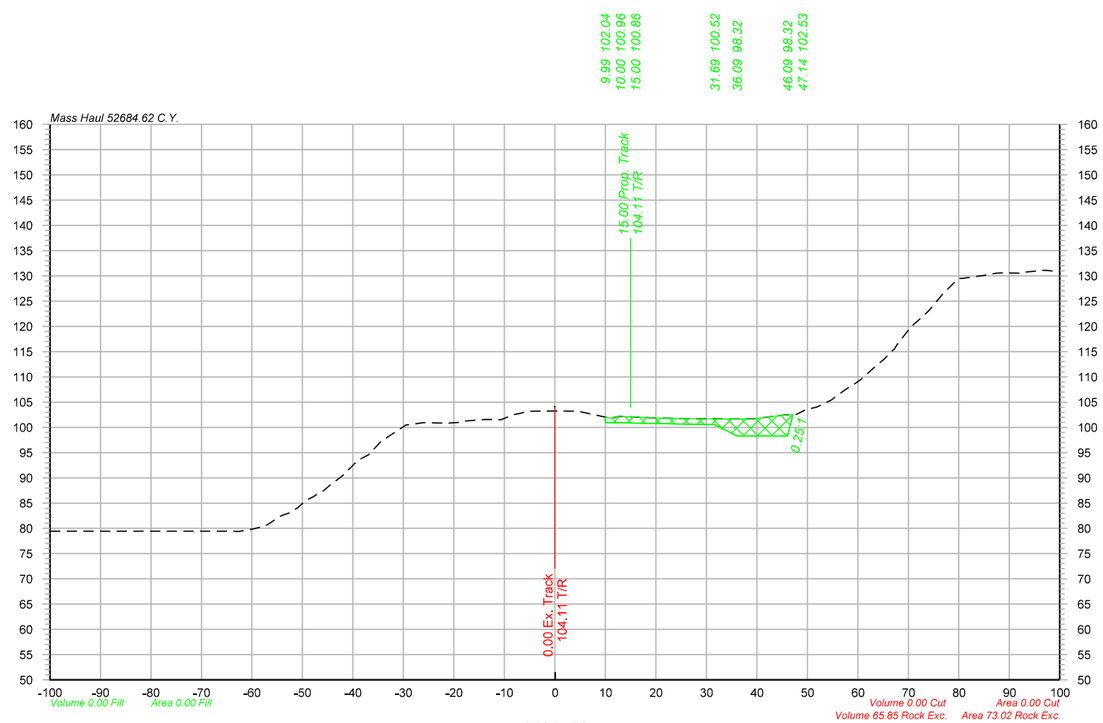
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

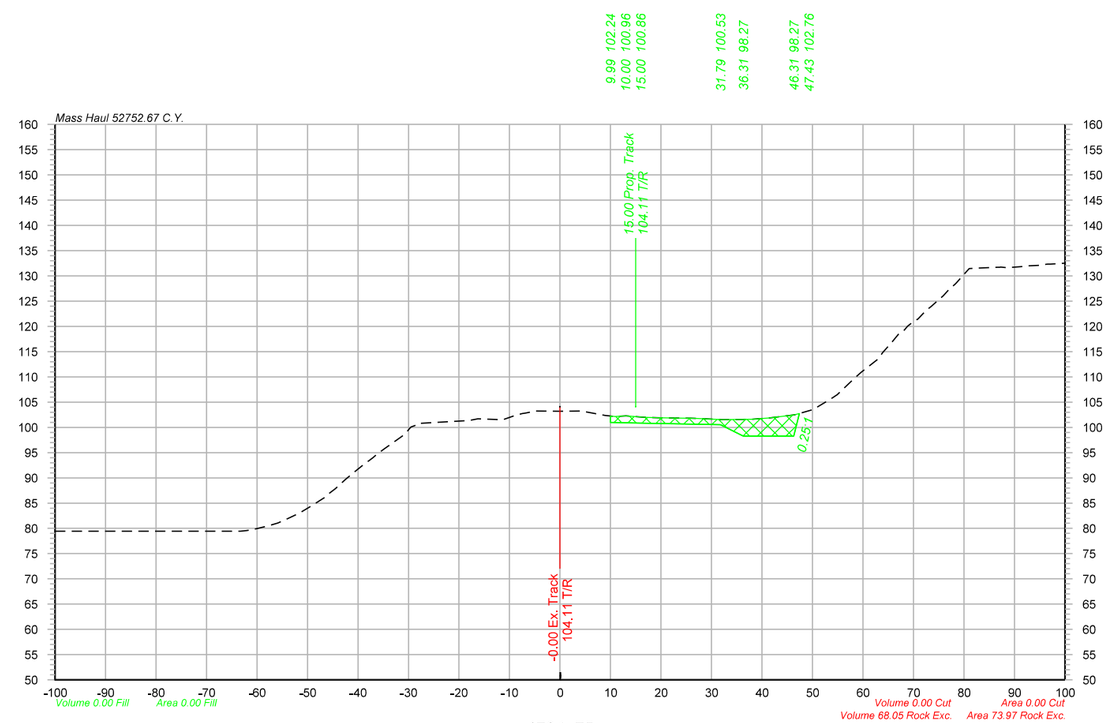
SHEET TITLE:
CROSS SECTIONS STA.1704+03 TO STA.1704+25

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\ipwrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1704+50

-100.00	79.42
-65.25	79.42
-59.90	79.87
-56.03	81.33
-52.70	83.00
-49.55	85.38
-45.75	87.49
-41.96	90.47
-38.67	93.65
-34.32	97.33
-30.11	100.05
-25.95	100.94
-21.32	100.80
-17.65	101.28
-13.69	101.59
-9.52	101.99
-5.29	103.21
0.10	103.22
4.71	103.18
10.99	101.83
21.06	101.80
29.89	101.69
33.95	101.65
39.71	101.73
44.71	102.36
47.86	102.55
51.88	104.02
55.71	106.19
59.18	108.50
62.68	111.35
67.00	115.31
70.58	119.94
74.12	123.16
77.16	126.73
80.64	129.51
84.22	130.01
87.41	130.54
92.06	130.54
95.41	130.97
100.00	130.87



1704+75

-100.00	79.42
-63.33	79.42
-57.68	80.50
-53.92	81.94
-49.25	84.43
-45.68	86.94
-42.48	89.69
-39.22	92.36
-34.83	95.74
-30.80	98.56
-27.34	100.83
-17.96	101.36
-12.76	101.56
-8.90	102.35
-4.80	103.22
-0.39	103.21
4.23	103.23
8.95	102.37
13.09	102.26
16.81	101.99
24.59	101.81
28.75	101.70
32.27	101.54
35.49	101.56
41.41	101.86
46.46	102.48
50.11	103.51
53.67	105.66
58.54	109.93
63.04	113.58
67.17	118.61
70.86	121.46
75.93	126.08
81.00	131.39
86.66	131.70
91.94	131.87
96.57	132.32
99.76	132.52

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2310
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 107 of 139

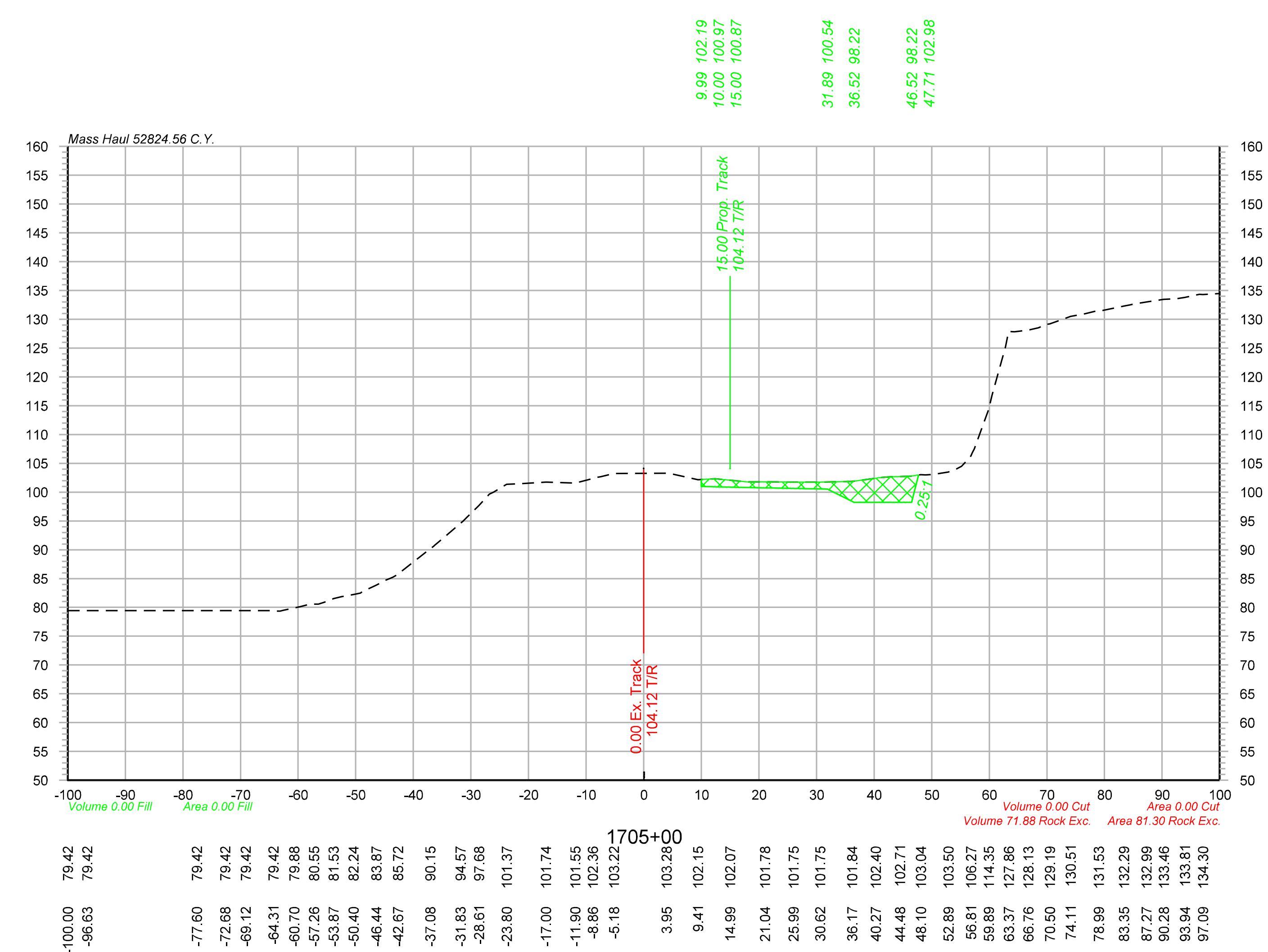
UNION PACIFIC RAILROAD

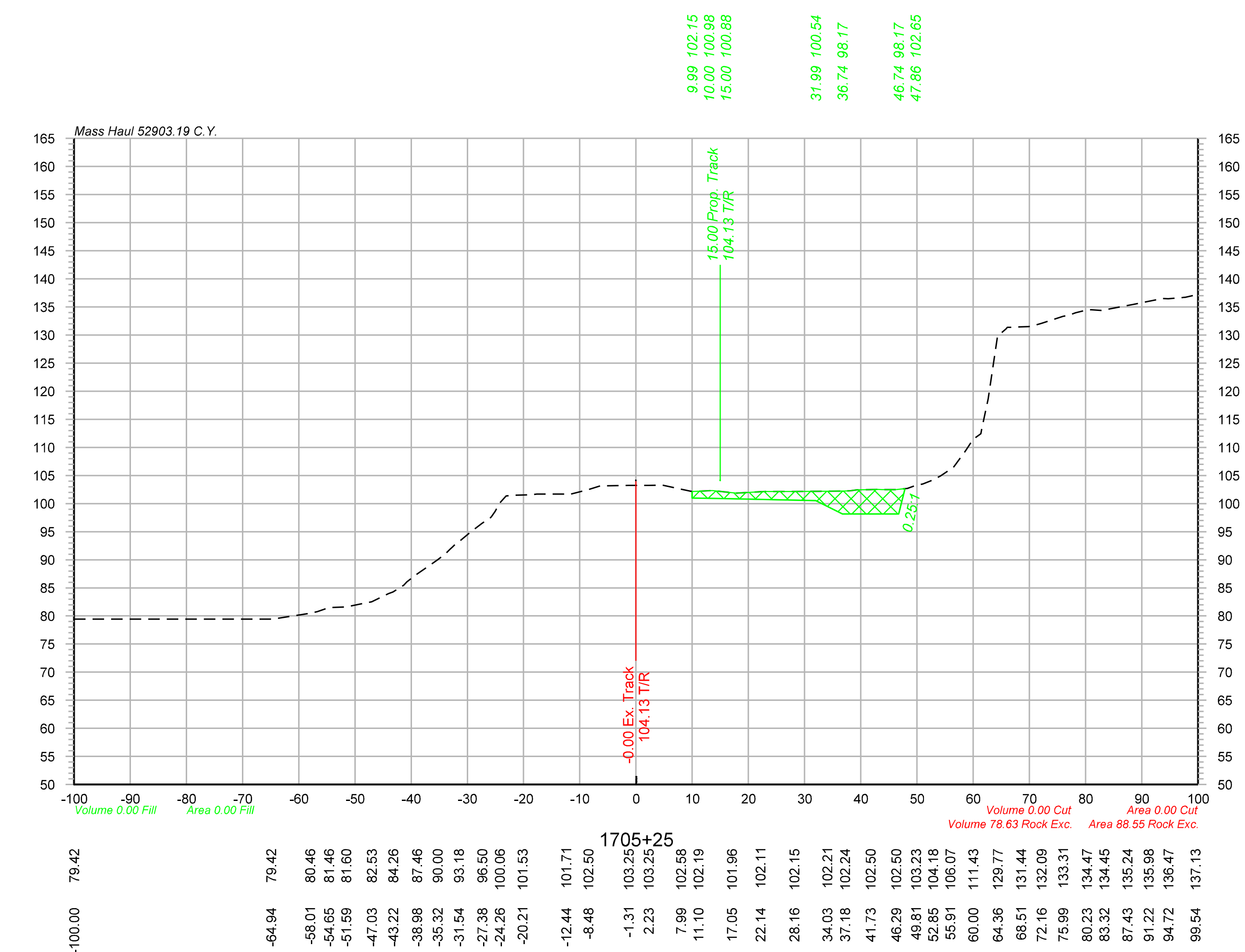
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1704+50 TO STA.1704+75

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\pgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES

2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG

CHECKED BY: RCK

DATE: 10/20/2014

SHEET NUMBER X 108 of 139

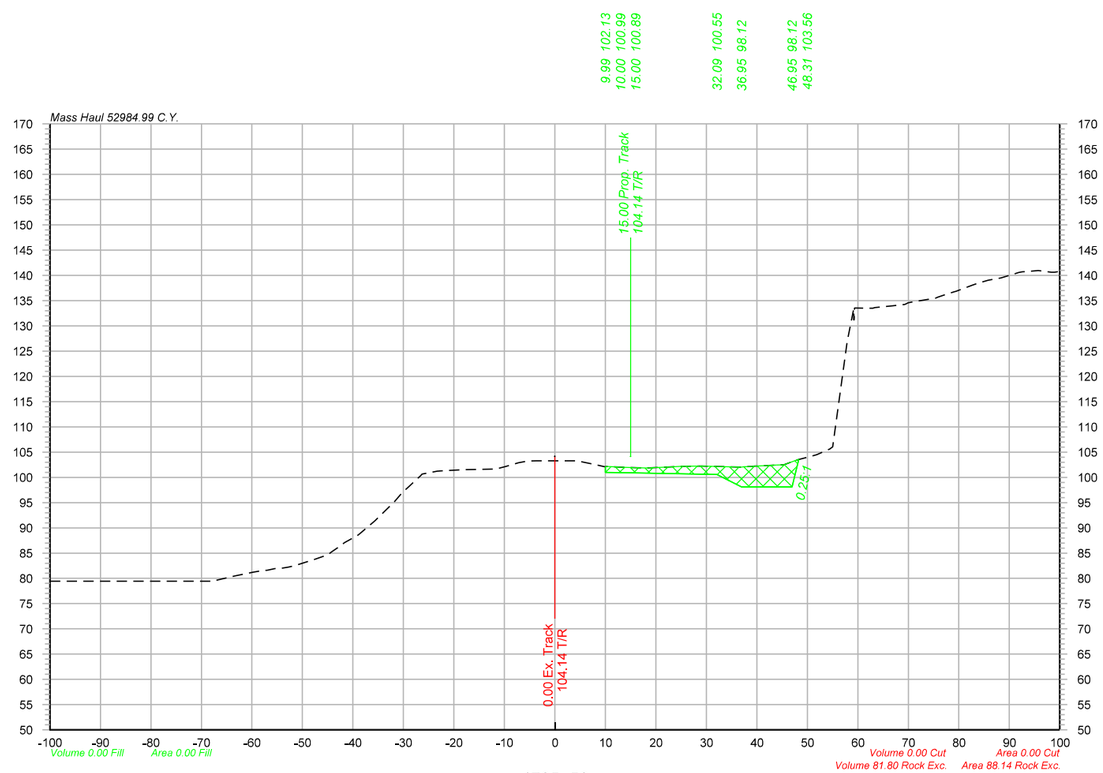
UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

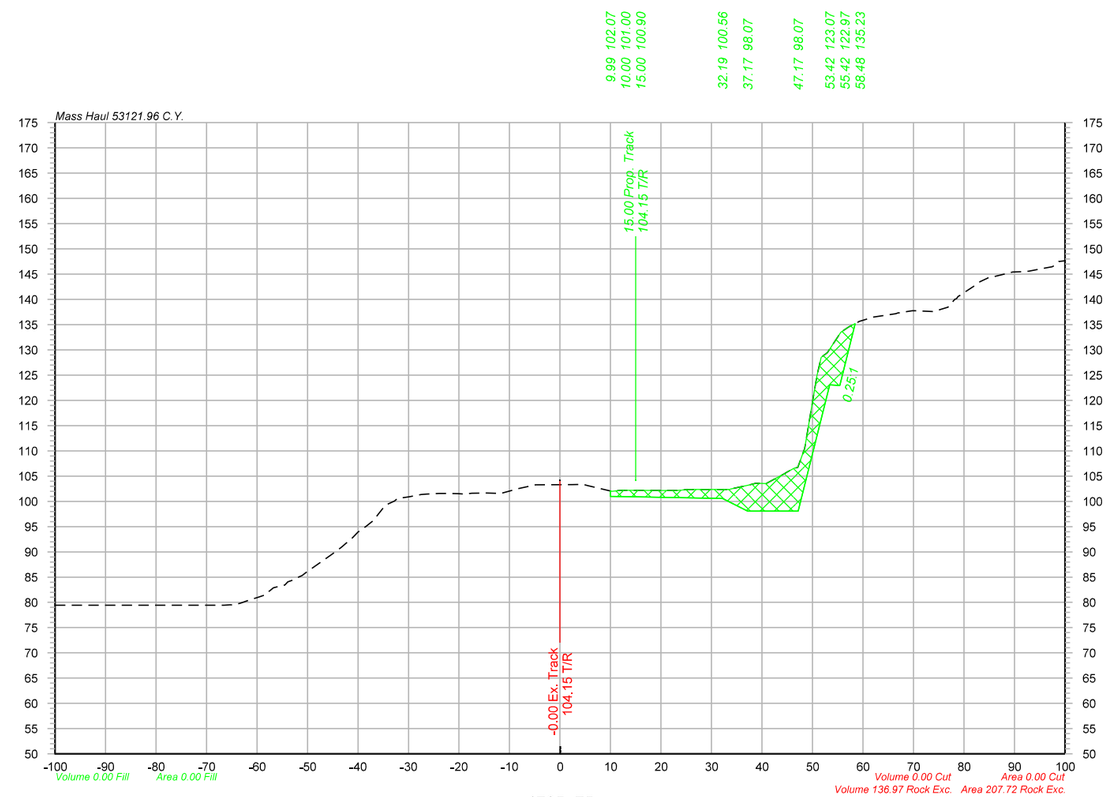
SHEET TITLE:
CROSS SECTIONS STA.1705+00 TO STA.1705+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1705+50

-100.00	79.42
-68.33	79.42
-63.56	80.43
-59.74	81.22
-55.43	81.95
-51.48	82.50
-48.34	83.51
-45.07	84.61
-41.69	87.08
-35.92	91.17
-31.80	95.13
-28.00	99.04
-23.47	101.21
-20.43	101.41
-15.70	101.56
-11.68	101.63
-7.16	102.90
-3.67	103.26
4.38	103.29
7.99	102.54
13.75	102.00
18.00	101.87
22.02	102.04
25.17	102.20
28.60	102.23
36.99	102.02
43.98	102.43
47.95	103.46
51.85	104.51
55.00	106.05
59.16	133.38
62.97	133.50
66.72	133.97
69.97	134.59
75.39	135.48
78.70	136.61
82.72	138.08
85.82	139.05
91.13	140.34
95.75	140.94
98.79	140.63



1705+75

-100.00	79.42
-90.67	79.42
-86.33	79.42
-67.51	79.42
-63.23	79.84
-59.87	80.96
-56.74	82.88
-52.84	84.44
-47.12	88.16
-43.36	90.84
-39.97	93.95
-34.81	98.96
-29.89	100.90
-26.38	101.43
-22.22	101.56
-18.83	101.45
-14.47	101.67
-9.91	102.06
-5.17	103.19
2.51	103.31
5.53	103.13
10.27	102.00
20.78	102.16
24.12	102.24
33.45	102.38
37.40	103.23
40.83	103.52
44.54	105.55
48.44	110.50
51.69	128.44
55.62	133.51
58.81	135.32
62.08	136.50
66.52	137.17
69.76	137.74
74.07	137.56
78.22	140.03
81.93	142.57
85.10	144.40
89.62	145.43
92.86	145.57
96.32	146.27
99.85	147.61

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 109 of 139

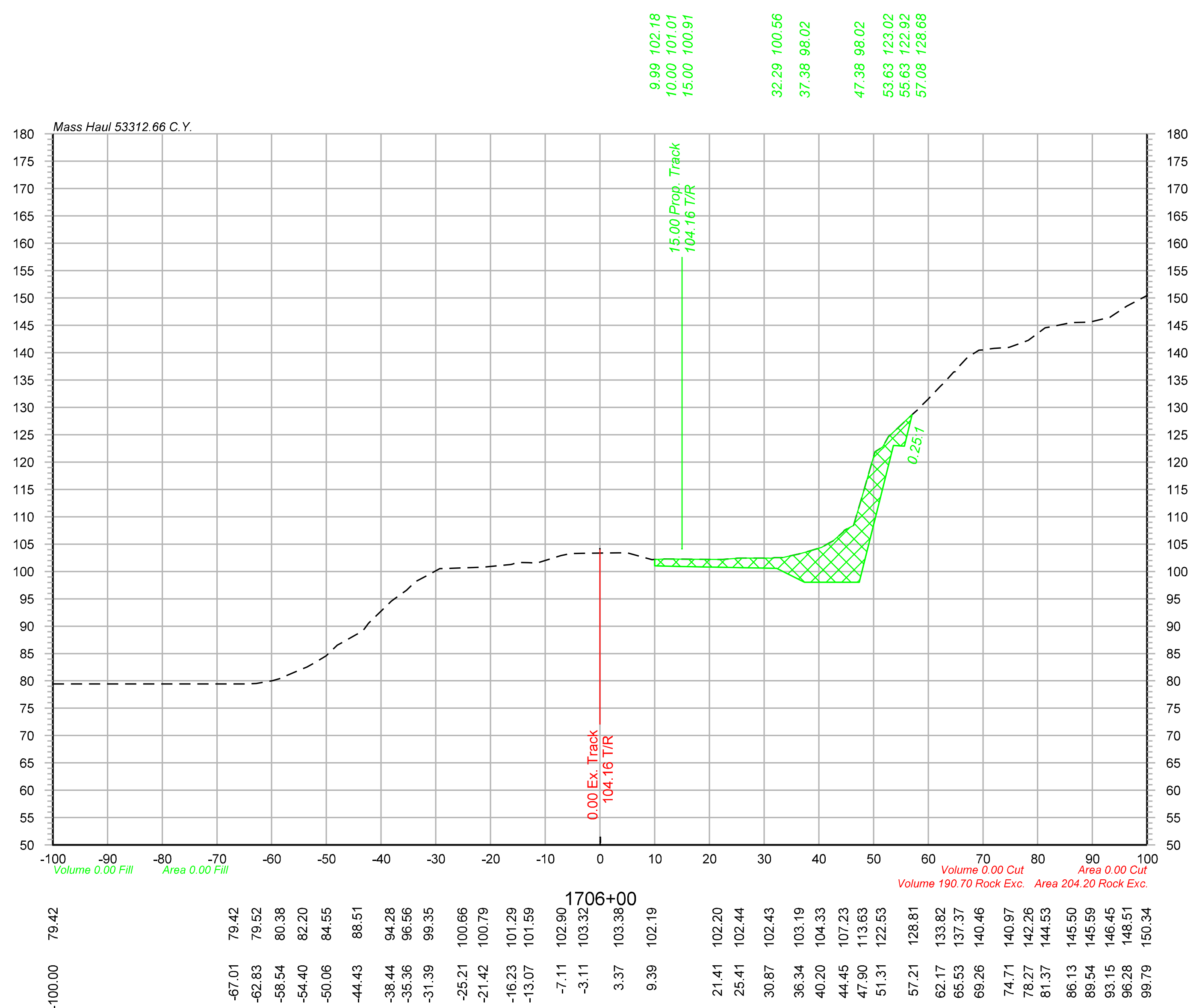
UNION PACIFIC RAILROAD

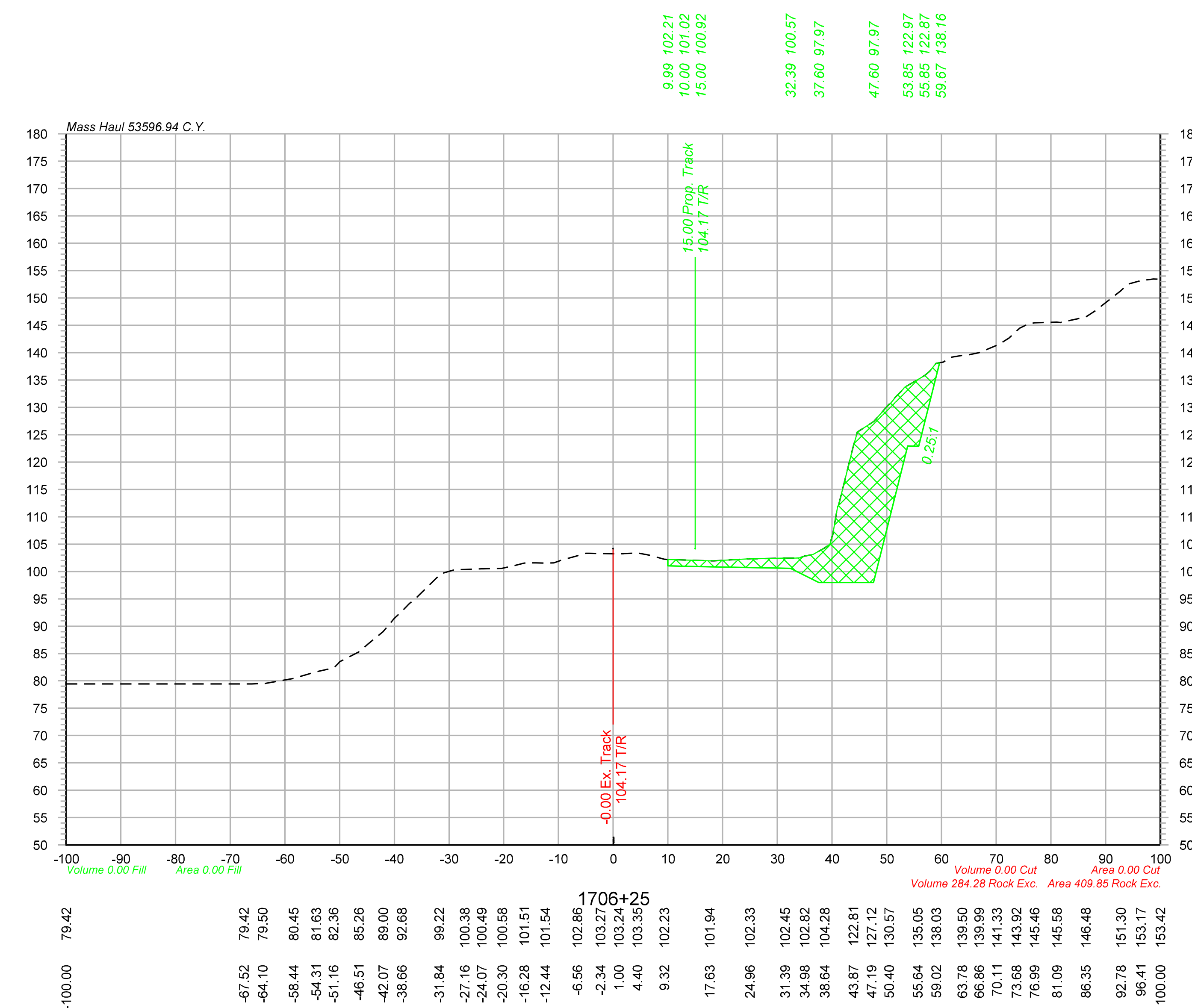
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1705+50 TO STA.1705+75

Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\wpsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

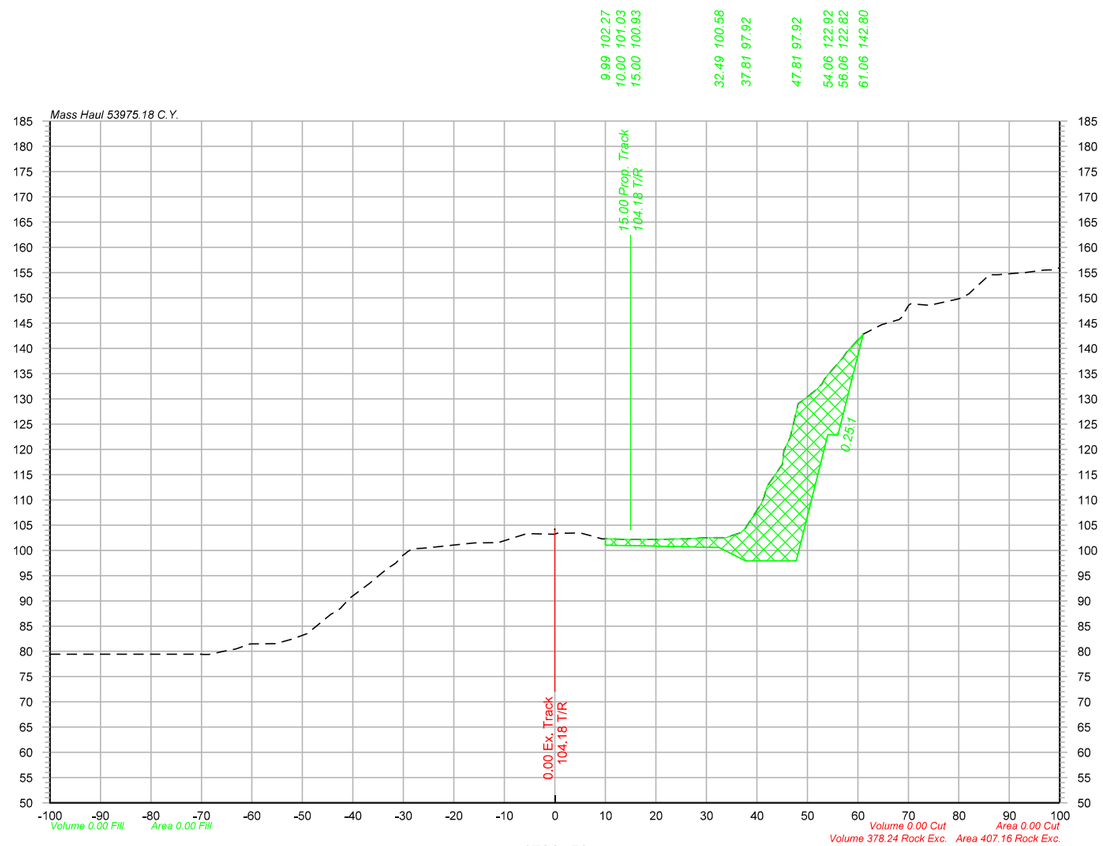
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 110 of 139

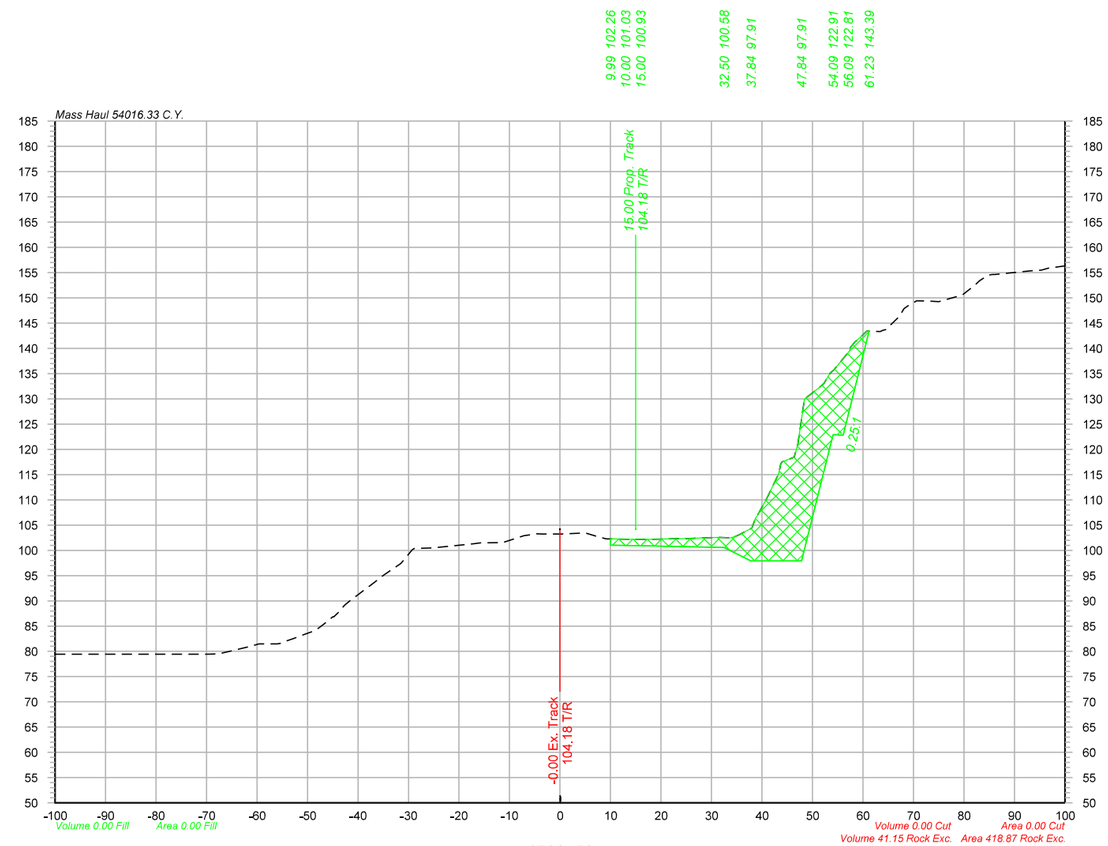
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1706+00 TO STA.1706+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-3910
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 111 of 139

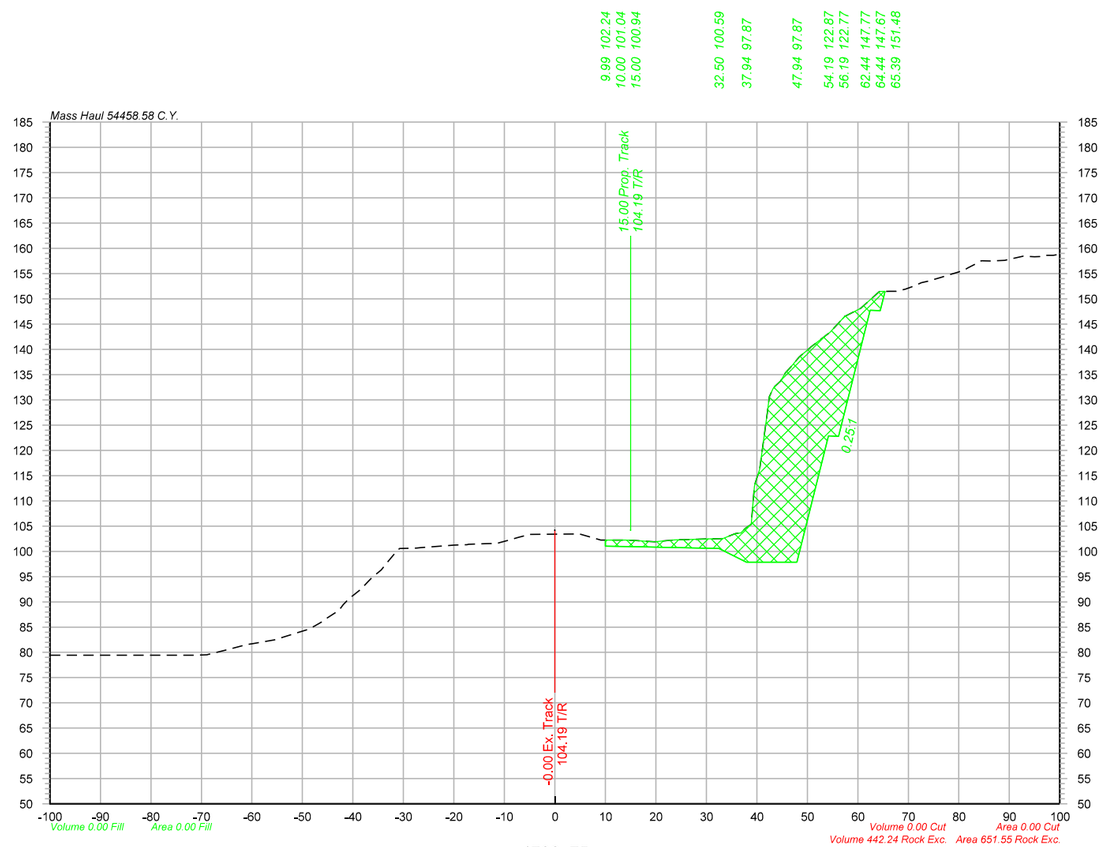
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

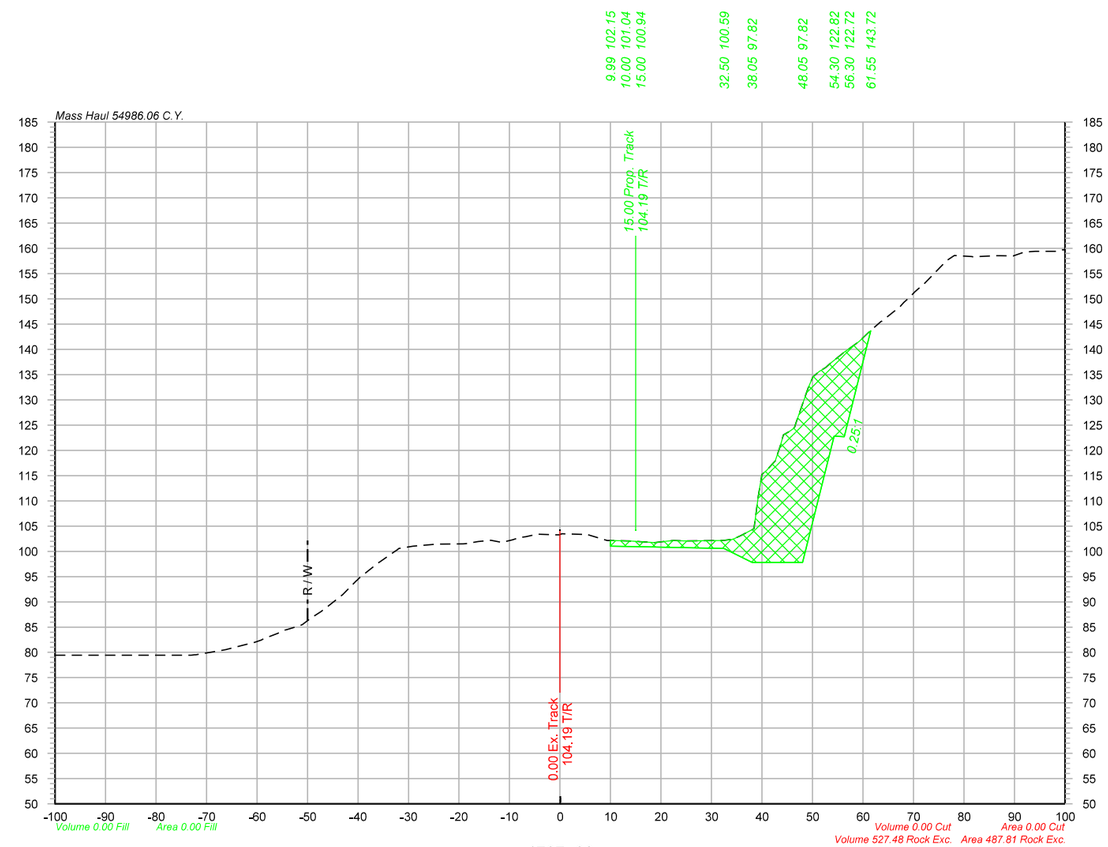
SHEET TITLE:
CROSS SECTIONS STA.1706+50 TO STA.1706+53

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1706+75

-100.00	79.42
-71.37	79.42
-64.75	80.54
-61.44	81.45
-55.52	82.49
-52.32	83.49
-48.80	84.57
-45.46	86.51
-41.90	89.46
-38.38	92.51
-34.39	96.30
-30.78	100.56
-27.40	100.66
-20.01	101.26
-13.63	101.54
-9.23	102.21
-4.94	103.36
-0.14	103.42
4.46	103.45
8.97	102.27
13.93	102.23
18.23	102.00
23.85	102.29
30.85	102.50
35.24	103.31
38.90	105.35
42.07	127.30
45.62	135.32
49.66	139.52
54.46	143.38
57.53	146.59
60.54	148.11
64.26	151.45
67.63	151.49
70.90	152.47
76.60	154.28
79.97	155.33
83.64	157.08
89.09	157.64
92.79	158.46
96.03	158.36
99.95	158.85



1707+00

-100.00	79.42
-73.51	79.42
-66.74	80.43
-62.35	81.51
-59.16	82.43
-55.99	83.74
-51.44	85.31
-47.28	88.12
-43.02	91.45
-40.00	94.48
-36.41	97.42
-32.91	99.87
-29.11	101.02
-24.25	101.46
-19.18	101.50
-13.70	102.18
-9.41	102.29
-4.53	103.39
-0.86	103.29
4.42	103.36
8.80	102.32
13.61	102.08
18.75	101.74
22.48	102.14
32.23	102.16
35.89	103.13
39.30	111.04
42.62	117.93
46.07	124.19
49.17	132.43
52.61	136.41
55.84	139.08
59.22	141.54
63.56	145.51
67.39	148.52
72.21	153.10
76.31	157.32
80.90	158.40
86.25	158.54
89.77	158.51
94.10	159.42
98.84	159.42

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2310
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 112 of 139

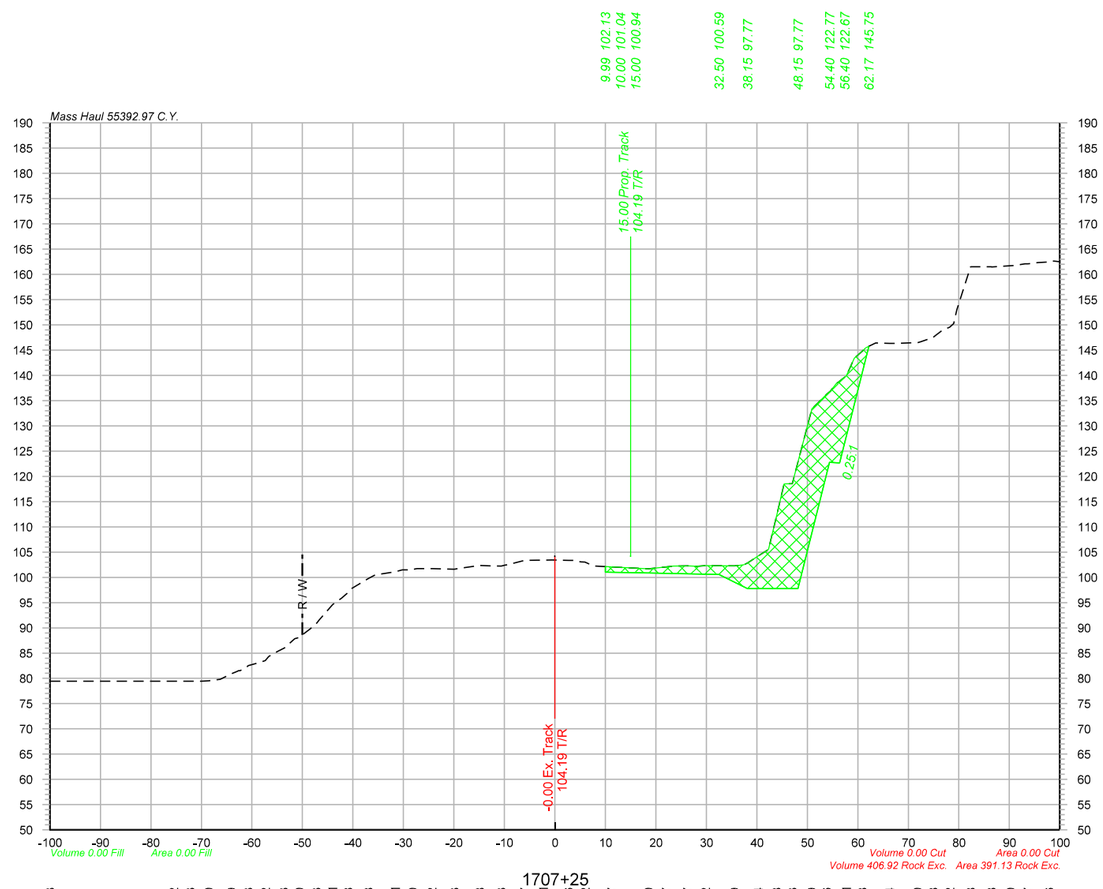
UNION PACIFIC RAILROAD

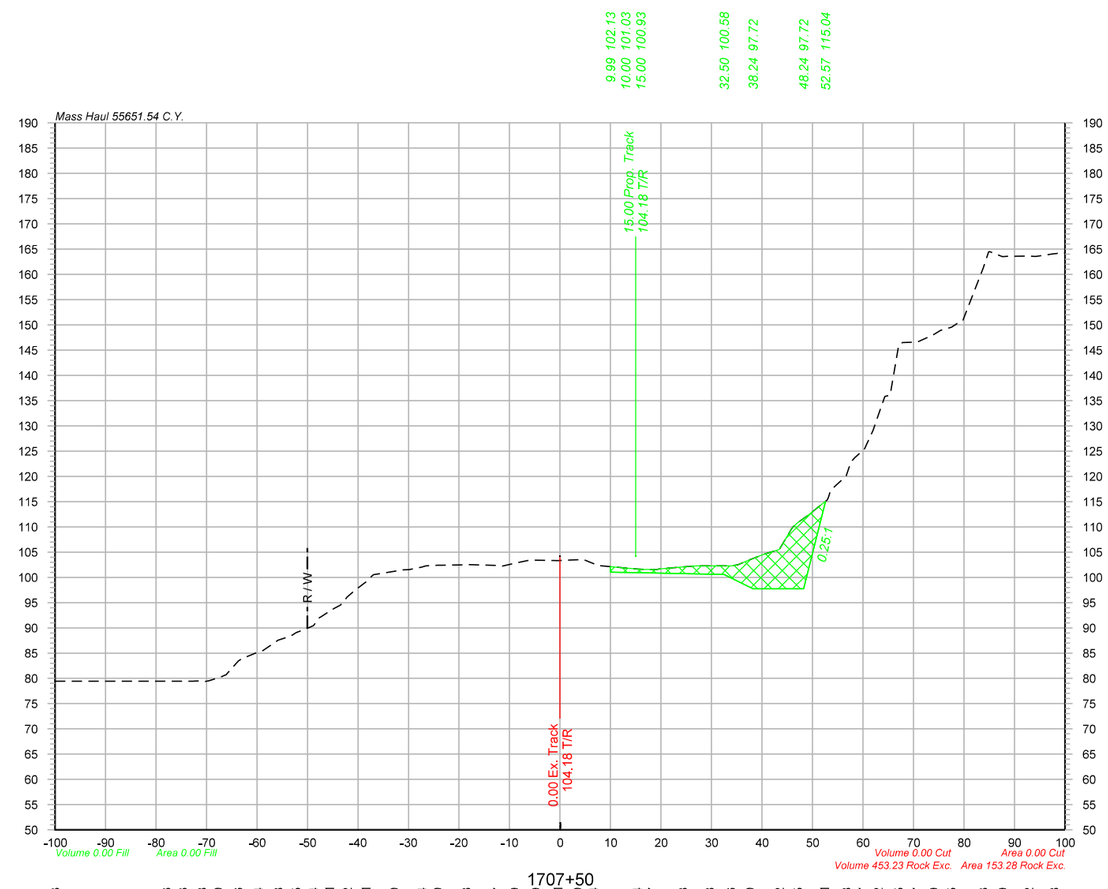
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1706+75 TO STA.1707+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\pgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





1707+25

-100.00	79.43
-75.52	79.42
-72.22	79.43
-68.56	79.50
-64.09	80.89
-60.74	82.53
-57.33	83.52
-53.74	85.93
-50.62	88.10
-47.25	90.83
-44.00	94.61
-40.96	96.98
-36.94	99.78
-31.58	101.11
-28.18	101.50
-24.37	101.72
-19.92	101.63
-14.88	102.38
-10.64	102.23
-6.01	103.37
-2.26	103.41
2.70	103.36
5.97	103.02
11.25	102.07
18.54	101.70
22.05	102.07
26.26	102.27
29.81	102.32
35.53	102.29
40.28	104.24
43.87	112.08
47.02	118.53
50.81	132.99
53.82	136.26
57.74	139.91
60.88	144.78
66.30	146.34
71.80	146.50
74.91	147.48
78.19	149.52
82.33	161.48
86.43	161.48
90.24	161.70
93.70	162.07
97.89	162.46

1707+50

-100.00	79.43
-77.98	79.43
-74.73	79.43
-70.94	79.48
-67.70	80.10
-63.71	83.46
-59.76	85.24
-55.81	87.58
-52.24	89.05
-48.83	90.44
-45.62	93.31
-42.15	96.12
-38.42	99.11
-32.85	101.20
-27.40	102.04
-24.26	102.40
-18.60	102.48
-12.37	102.37
-9.04	102.79
-4.83	103.39
-0.41	103.31
3.46	103.50
6.63	102.74
15.27	101.64
18.29	101.57
24.32	102.08
29.62	102.28
33.86	102.26
37.59	103.50
43.42	105.52
47.12	110.85
52.39	114.91
56.69	120.08
60.00	125.27
63.00	132.02
67.09	146.05
70.73	146.57
73.99	148.09
77.54	149.55
83.79	161.23
87.63	163.49
92.84	163.62
97.85	164.08

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2310
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 113 of 139

UNION PACIFIC RAILROAD

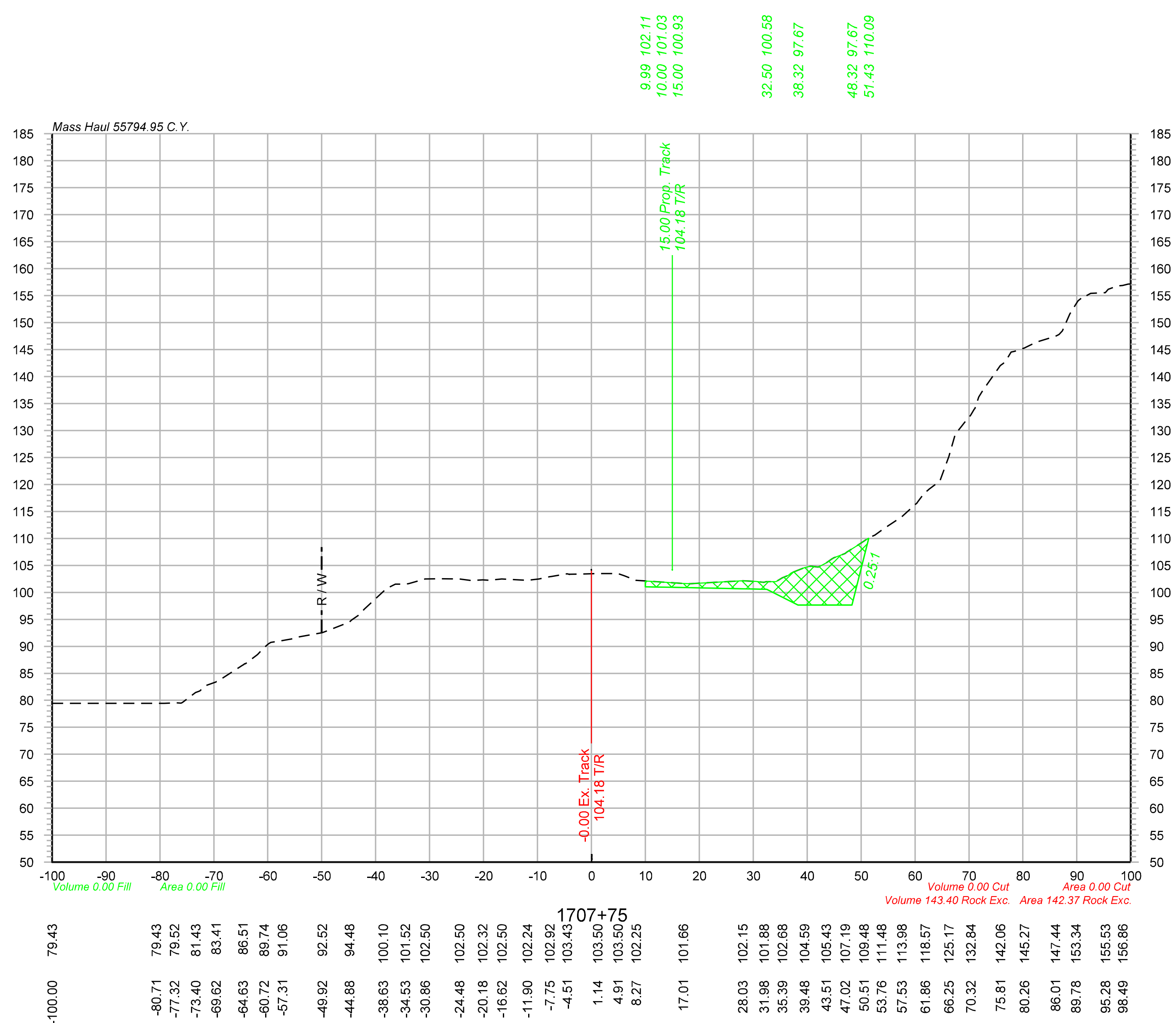
Office of Assistant Vice President
Engineering Design/Construction

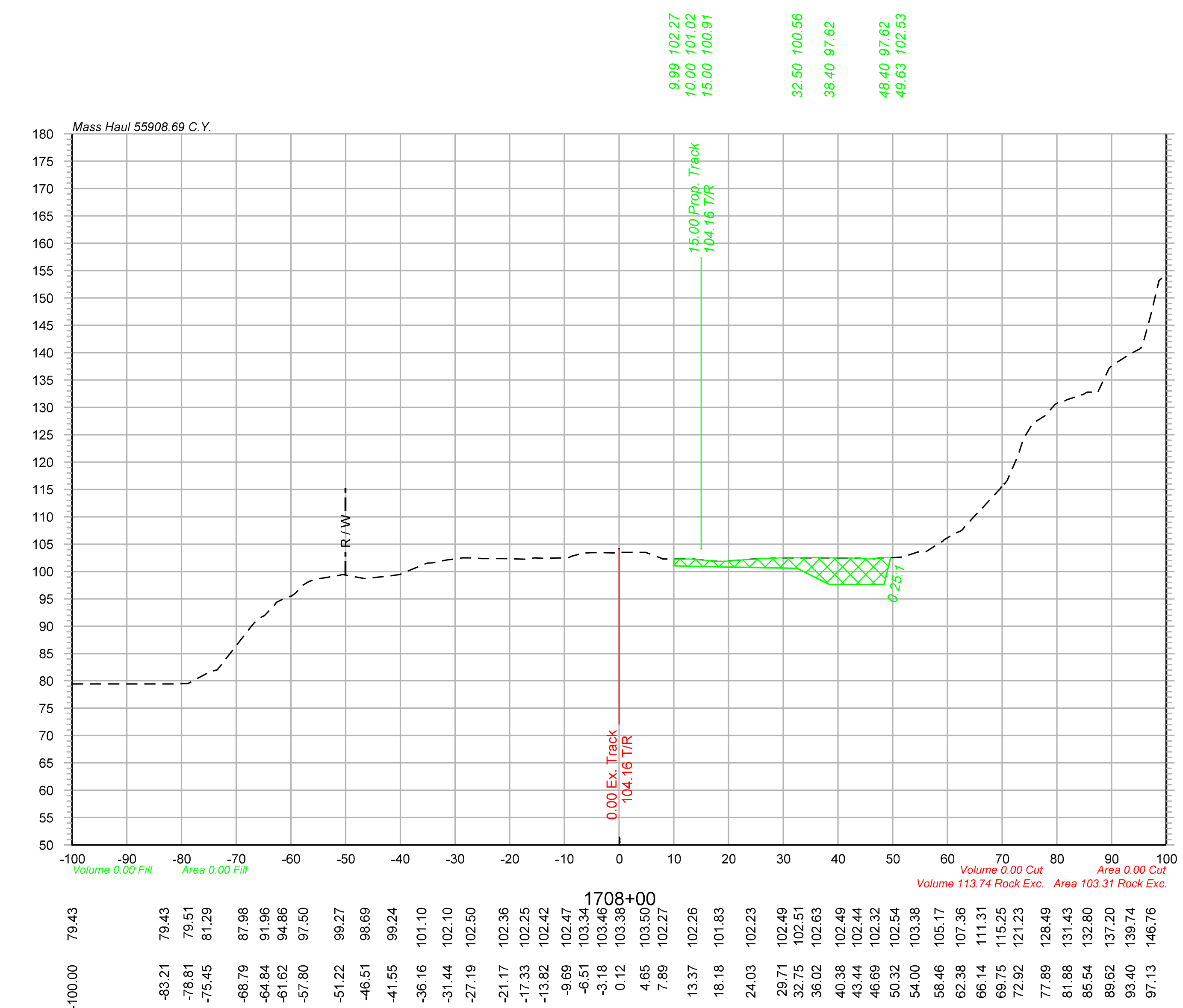
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1707+25 TO STA.1707+50

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



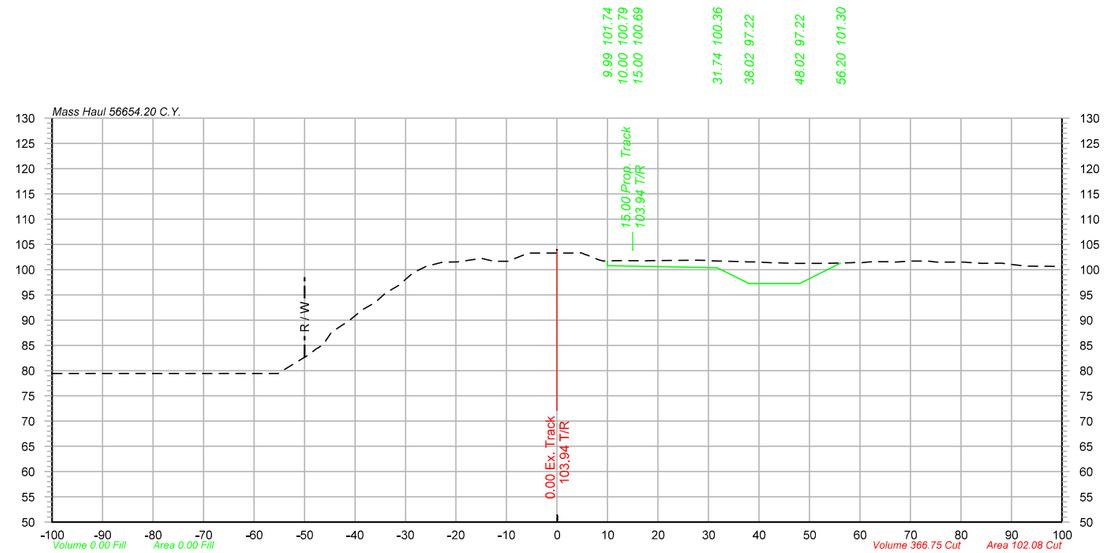


Legend

Assumed Rock Excavation

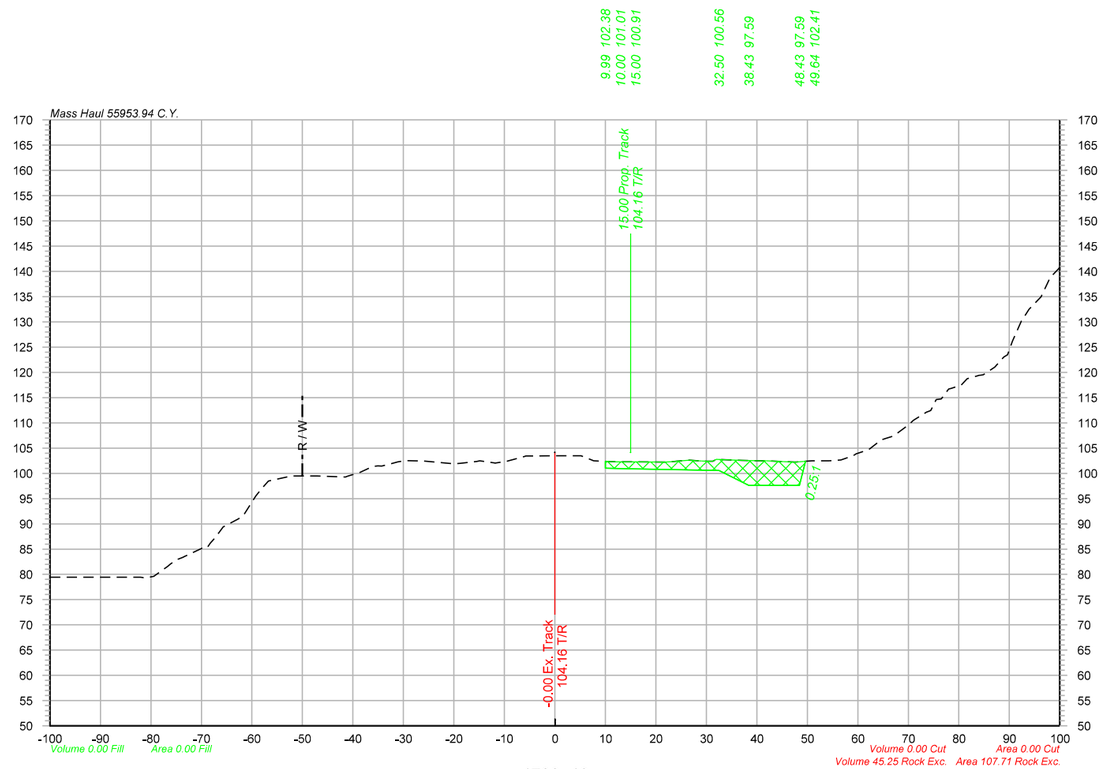
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon; Portland Subdivision MP 66.98 to MP 72.35; Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER: X 114 of 139	SHEET TITLE: CROSS SECTIONS STA.1707+75 TO STA.1708+00



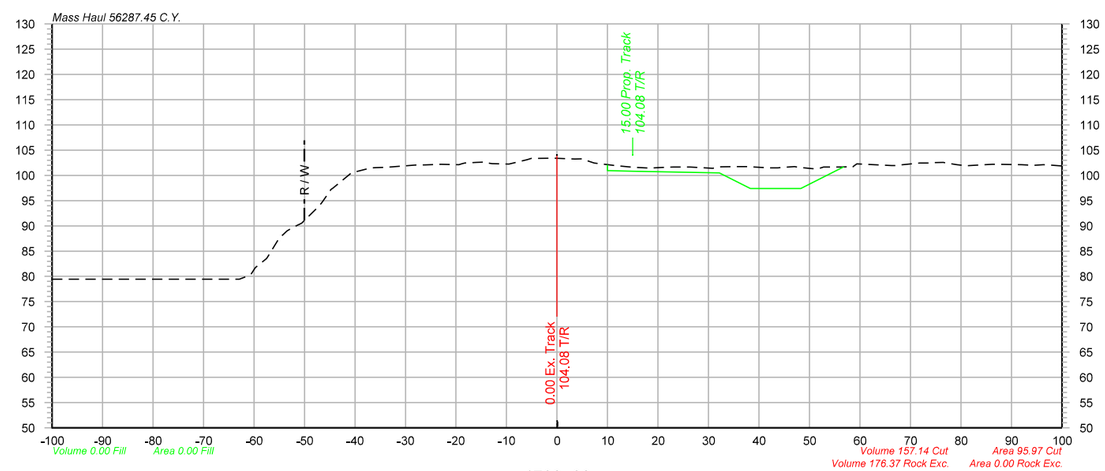
1710+00

-100.00	79.43
-96.19	79.43
-92.54	79.43
-87.12	79.43
-83.28	79.43
-60.18	79.43
-56.93	79.43
-53.83	80.33
-50.75	82.20
-47.73	84.27
-44.68	87.50
-41.11	89.95
-36.92	92.97
-33.87	95.42
-28.52	99.35
-22.64	101.50
-19.63	101.52
-15.24	102.19
-11.35	101.64
-6.79	102.81
0.07	103.28
4.84	103.30
8.35	101.89
11.78	101.76
15.24	101.78
18.25	101.77
27.65	101.84
35.63	101.61
39.35	101.51
42.52	101.35
46.98	101.25
52.92	101.24
58.15	101.34
61.84	101.52
65.52	101.55
68.71	101.61
73.42	101.69
80.66	101.47
83.85	101.27
87.68	101.28
92.79	100.69
98.55	100.66



1708+12

-100.00	79.43
-82.49	79.43
-79.44	79.58
-76.07	82.12
-70.01	85.12
-65.68	89.38
-61.94	91.52
-58.08	97.00
-52.35	99.44
-48.79	99.50
-44.80	99.40
-41.49	99.27
-36.10	101.34
-32.47	101.89
-27.97	102.50
-20.54	101.96
-15.48	102.36
-11.98	102.06
-5.97	103.38
-0.18	103.49
5.15	103.49
9.23	102.42
13.36	102.28
21.90	102.25
26.68	102.59
30.20	102.41
34.80	102.66
40.98	102.50
44.60	102.38
47.69	102.24
50.95	102.50
54.23	102.50
58.55	103.31
62.15	104.72
65.49	106.91
69.28	109.04
73.65	112.14
77.97	116.71
81.64	118.73
84.86	119.54
88.92	123.03
92.56	130.56
96.27	134.94
99.75	140.48



1709+00

-100.00	79.43
-69.04	79.43
-65.91	79.43
-61.15	80.08
-57.55	83.54
-53.48	88.99
-49.94	91.15
-46.71	94.46
-41.26	100.02
-37.63	101.27
-33.60	101.63
-27.71	102.06
-22.97	102.18
-19.44	102.10
-15.97	102.58
-12.85	102.32
-9.51	102.25
-5.91	103.12
-0.61	103.39
3.55	103.24
7.36	102.42
11.49	101.95
15.01	101.59
18.27	101.45
23.05	101.65
26.25	101.64
30.83	101.40
35.60	101.74
41.36	101.52
44.60	101.57
47.75	101.62
52.04	101.46
56.23	101.66
59.37	102.26
66.27	101.94
71.85	102.46
76.51	102.55
81.00	101.89
86.20	102.21
92.06	102.13
96.31	102.13
100.00	101.87

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 115 of 139

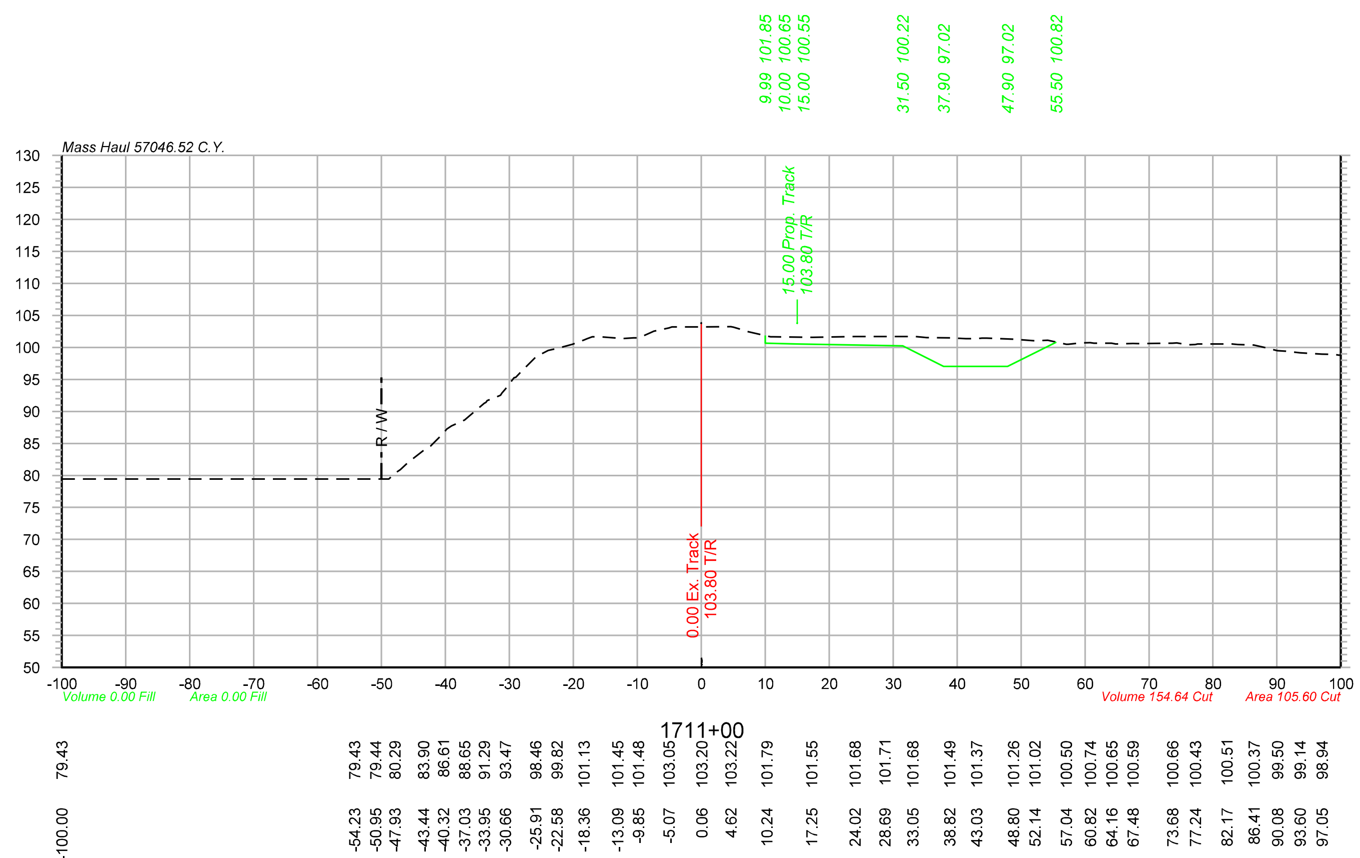
UNION PACIFIC RAILROAD

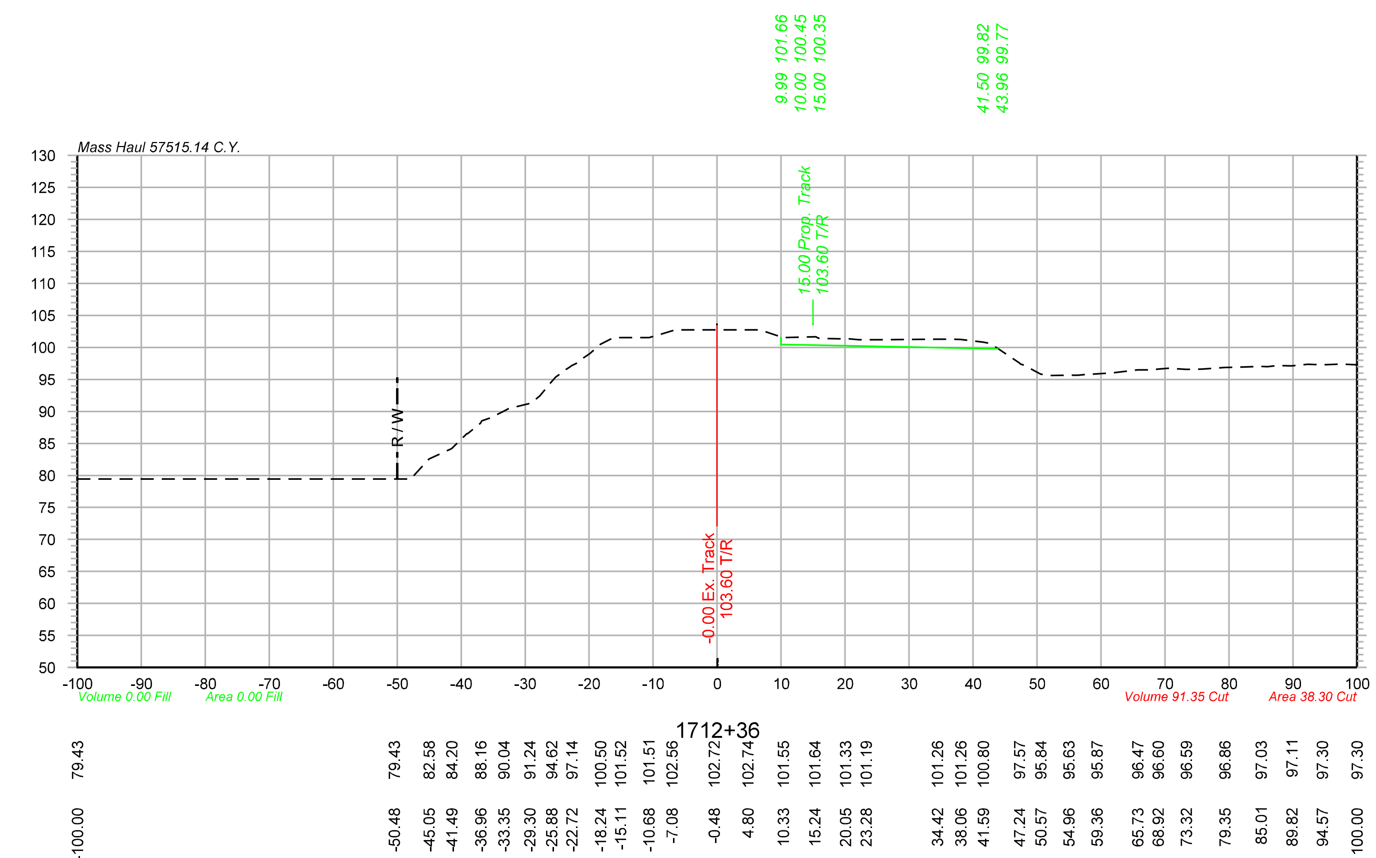
Office of Assistant Vice President
Engineering Design/Construction

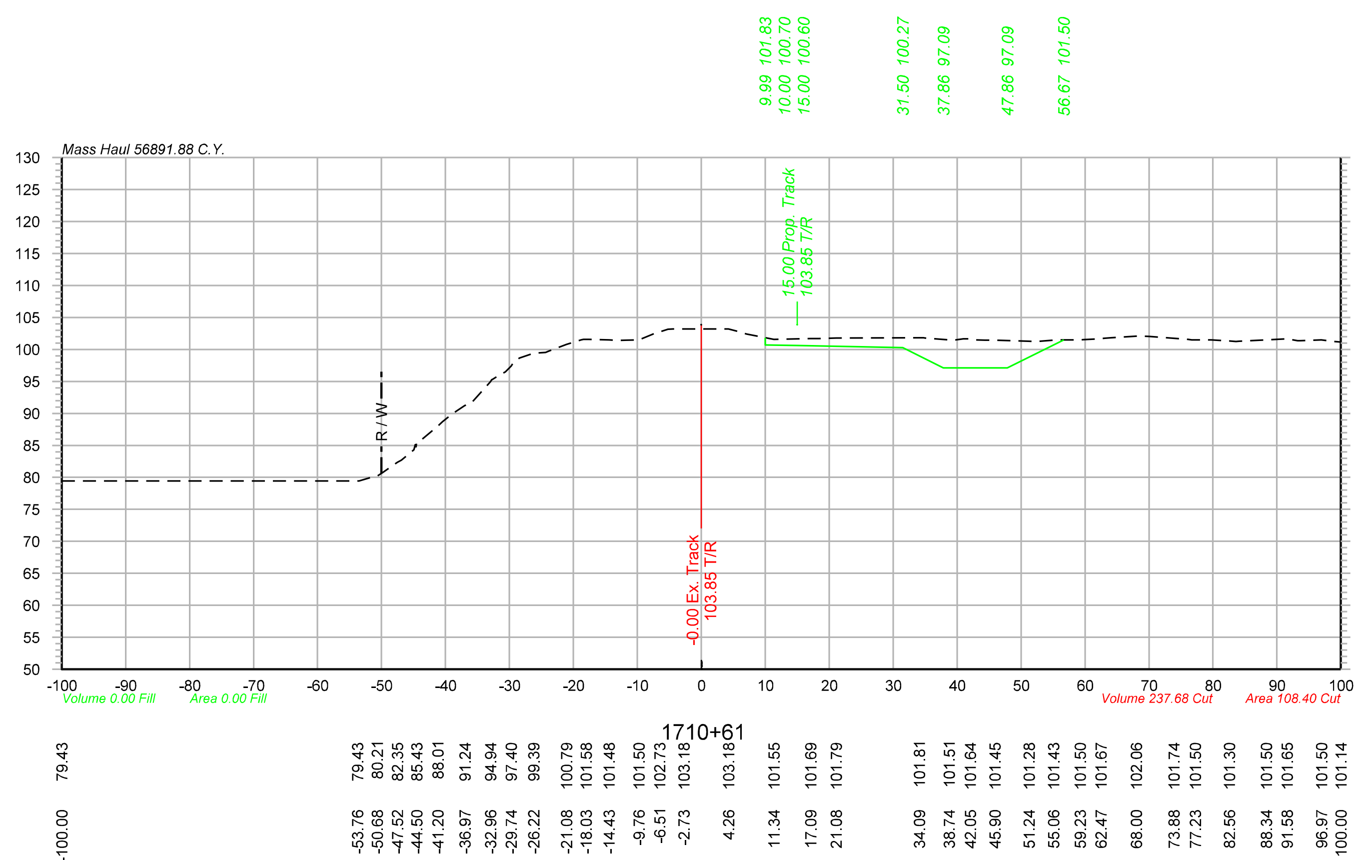
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

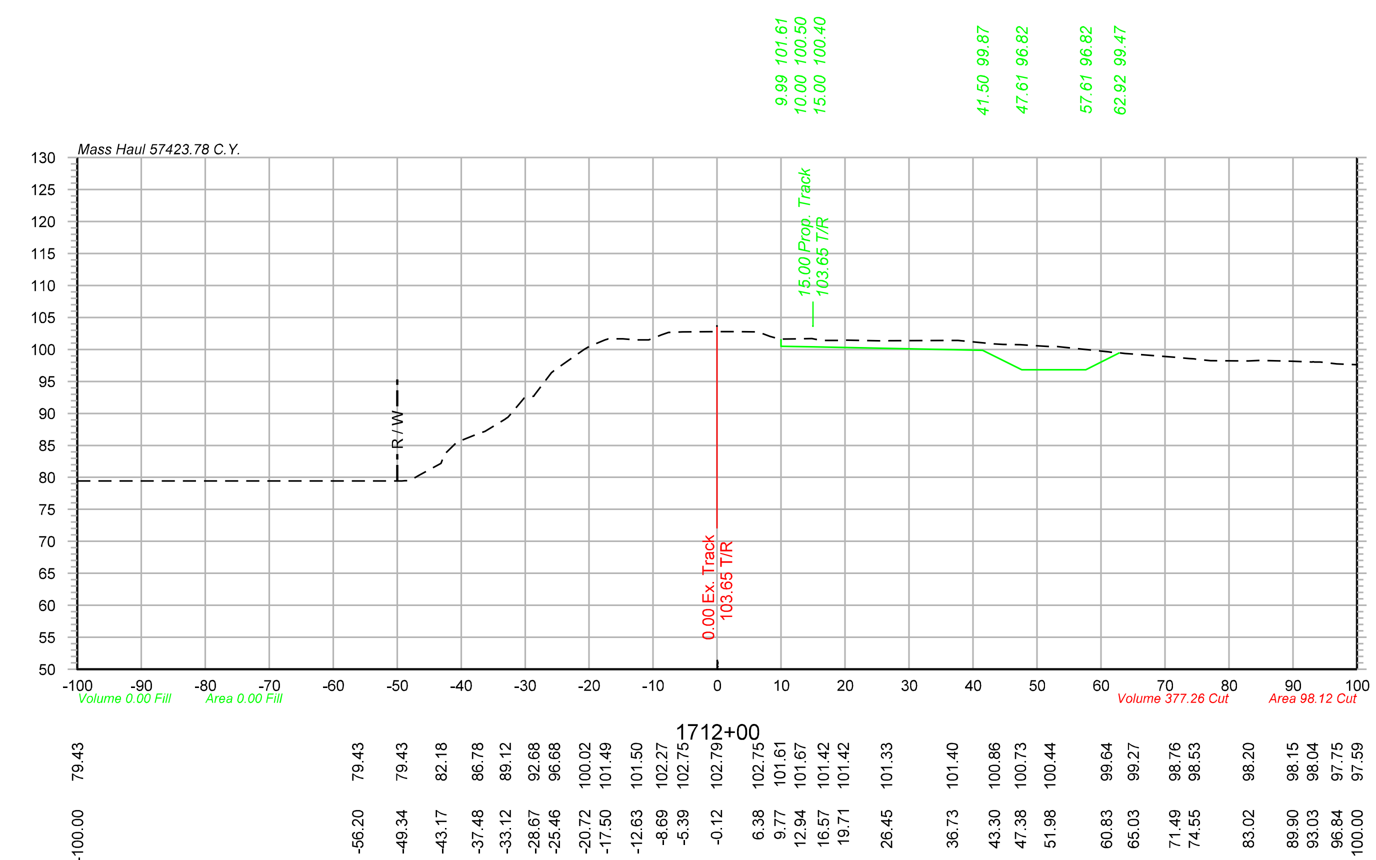
SHEET TITLE:
CROSS SECTIONS STA.1708+12 TO STA.1710+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\wpsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014







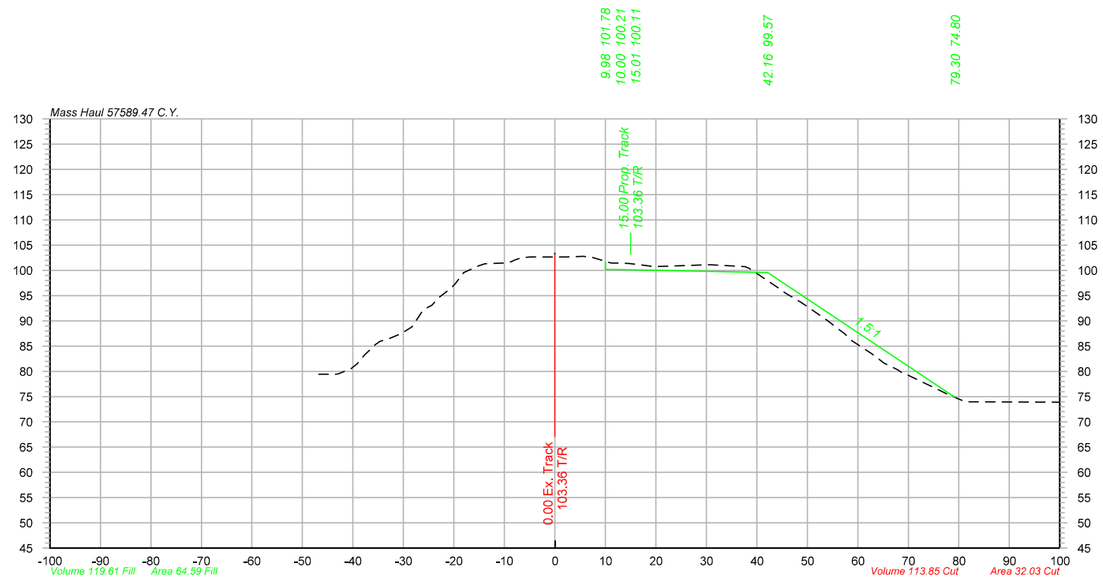


Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES®
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810
TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

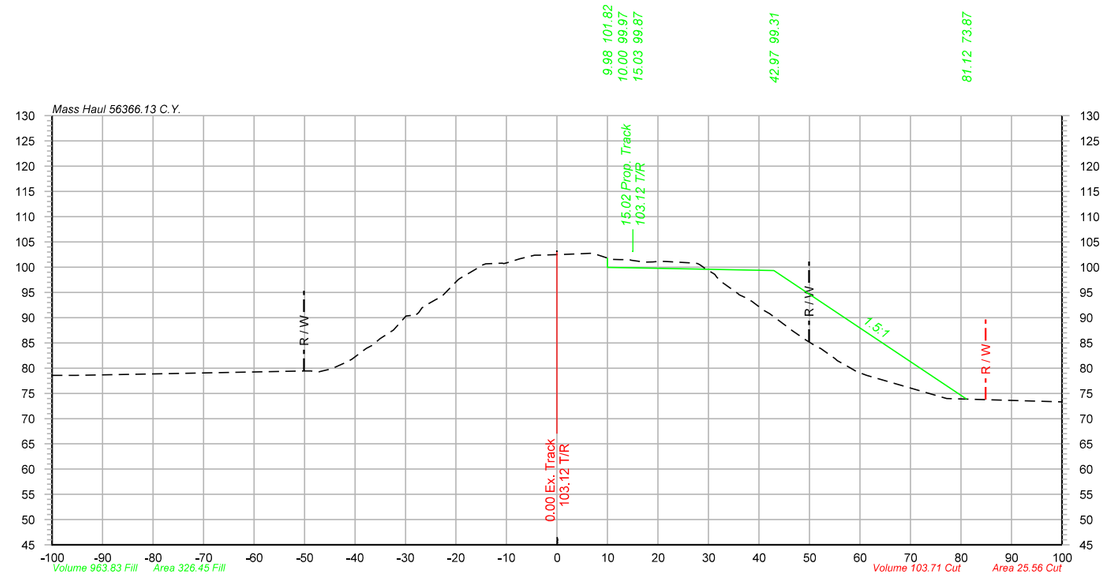
UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 116 of 139	SHEET TITLE: CROSS SECTIONS STA.1710+61 TO STA.1712+36



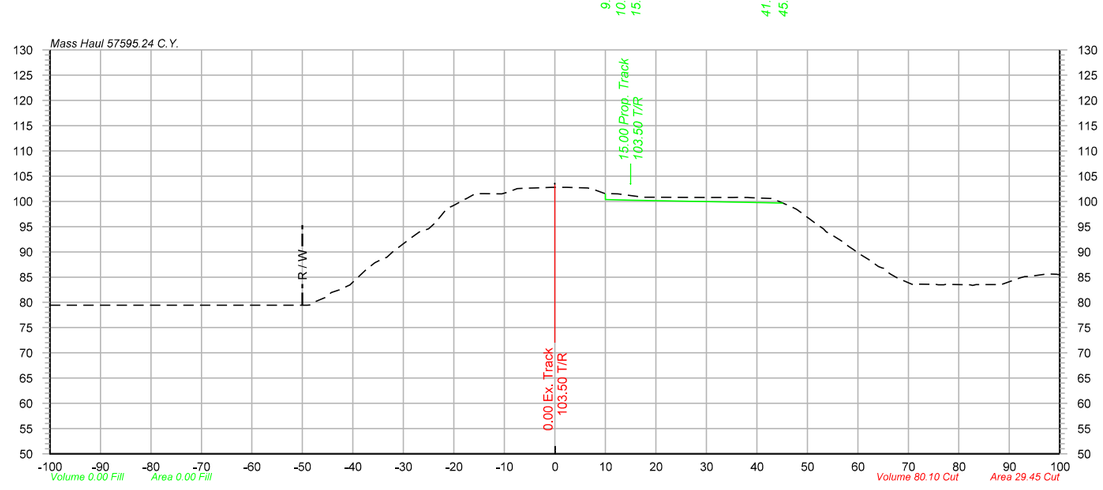
1714+00

-100.00	79.43
-95.31	79.43
-79.75	79.43
-49.83	80.51
-46.29	84.35
-41.31	86.57
-37.78	88.84
-32.59	93.10
-28.46	96.49
-25.40	100.92
-20.98	101.50
-17.41	102.65
-14.11	102.65
-10.84	102.66
-7.36	102.79
-3.57	102.11
0.56	101.43
4.89	100.97
9.65	100.82
14.34	101.07
17.35	100.97
20.41	100.75
27.50	98.18
31.26	95.50
35.85	93.60
40.98	90.17
46.20	87.52
49.29	83.56
55.04	80.33
59.27	77.24
77.19	75.51
100.00	73.96
	73.88



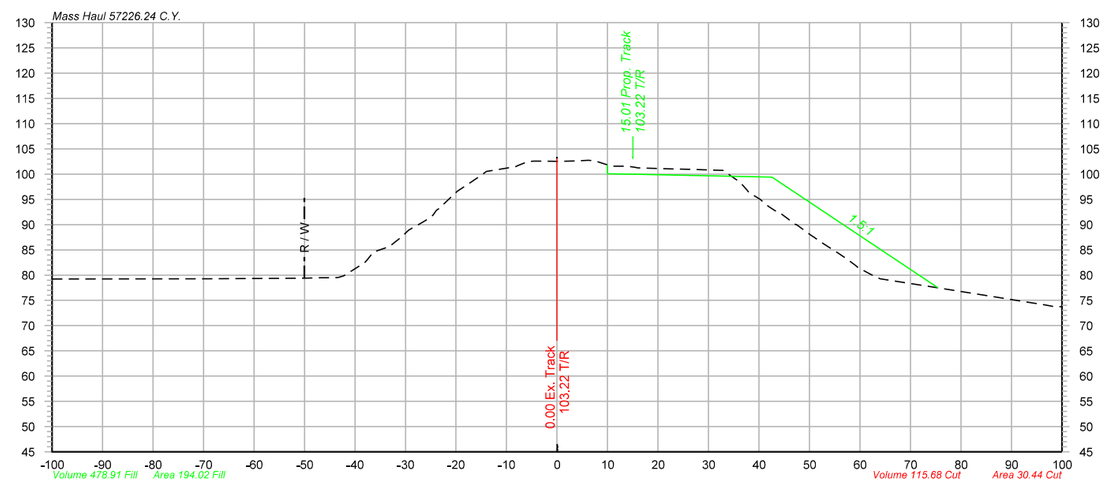
1716+00

-100.00	78.56
-95.31	78.56
-79.75	78.87
-49.83	79.43
-46.29	79.48
-41.31	81.36
-37.78	83.92
-32.59	87.40
-28.46	90.48
-25.40	92.77
-20.98	96.08
-17.41	98.81
-14.11	100.67
-10.84	100.79
-7.36	101.66
-3.57	102.37
0.56	102.50
4.89	102.66
9.65	101.93
14.34	101.50
17.35	100.98
20.41	101.14
27.50	100.79
31.26	98.56
35.85	94.72
40.98	91.45
46.20	87.74
49.29	85.58
55.04	81.89
59.27	79.35
77.19	73.99
100.00	73.33



1713+00

-100.00	79.43
-86.77	79.43
-85.20	79.43
-78.21	79.43
-73.53	79.43
-49.71	79.43
-45.14	81.09
-40.73	83.41
-37.37	86.46
-33.27	88.94
-28.32	92.88
-24.99	94.55
-21.57	98.32
-17.67	100.47
-13.97	101.53
-10.76	101.47
-7.46	102.53
-4.03	102.64
-0.59	102.79
6.49	102.65
9.96	101.54
16.59	100.95
19.89	100.82
29.94	100.79
35.28	100.79
38.59	100.75
42.83	100.58
46.62	99.05
51.72	95.58
56.73	92.17
60.65	89.41
64.06	87.12
67.86	84.81
71.20	83.62
75.42	83.56
79.79	83.52
83.40	83.50
88.11	83.51
92.16	84.85
95.22	85.31
99.39	85.54



1715+00

-100.00	79.23
-69.20	79.25
-49.96	79.42
-46.70	79.48
-43.38	79.51
-38.75	82.07
-33.56	85.51
-29.42	88.84
-26.03	90.81
-20.79	95.60
-16.86	98.51
-10.94	101.04
-7.65	101.73
-4.59	102.55
0.12	102.52
3.74	102.62
7.56	102.63
10.79	101.56
13.92	101.57
22.68	101.01
26.52	100.93
30.10	100.81
33.20	100.55
36.23	98.40
40.19	95.03
43.63	92.46
47.24	90.01
50.31	87.92
55.88	84.25
59.42	81.67
63.74	79.41
74.68	77.61
88.81	75.35
94.21	74.50
98.64	73.73

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 117 of 139

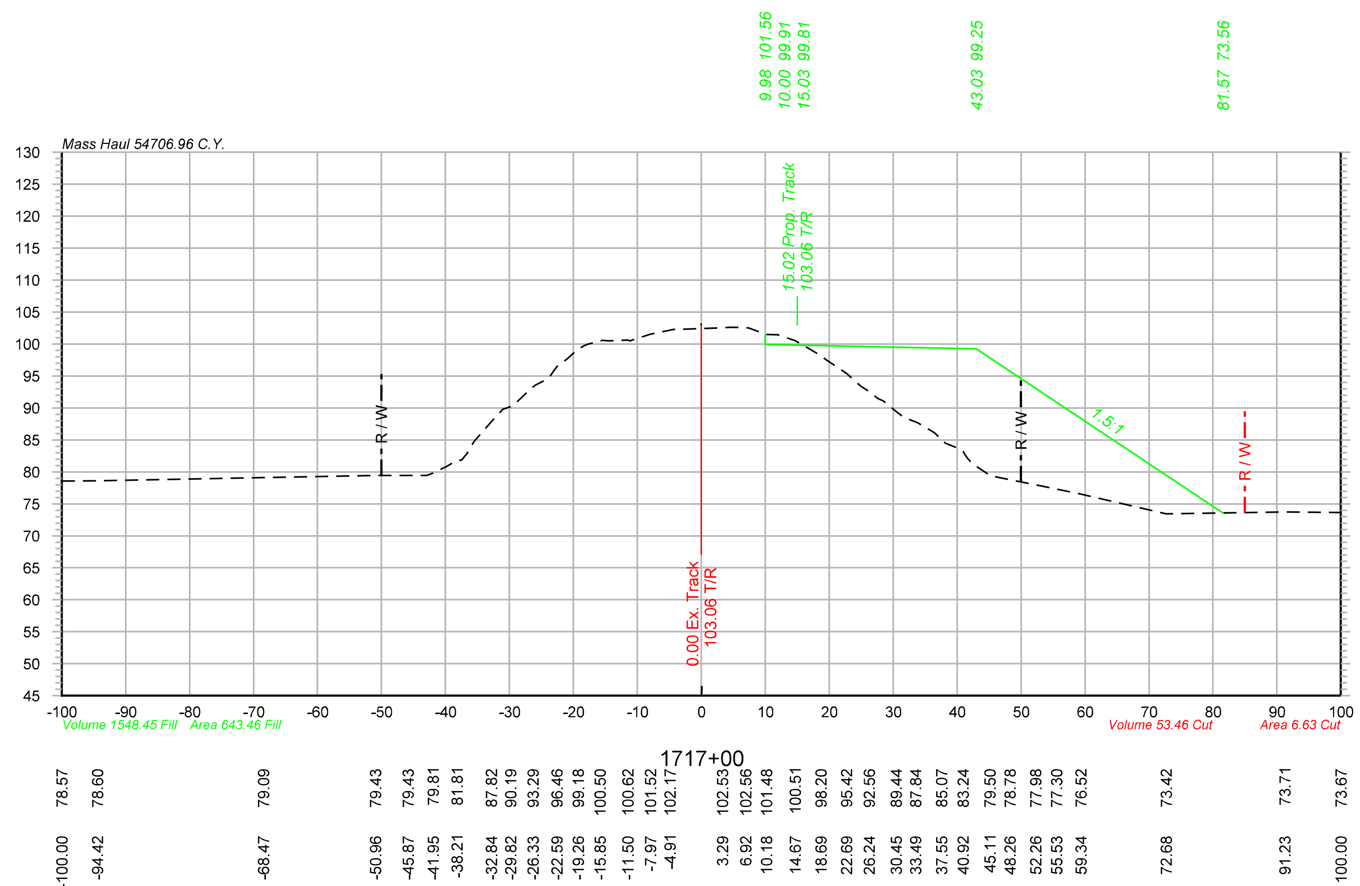
UNION PACIFIC RAILROAD

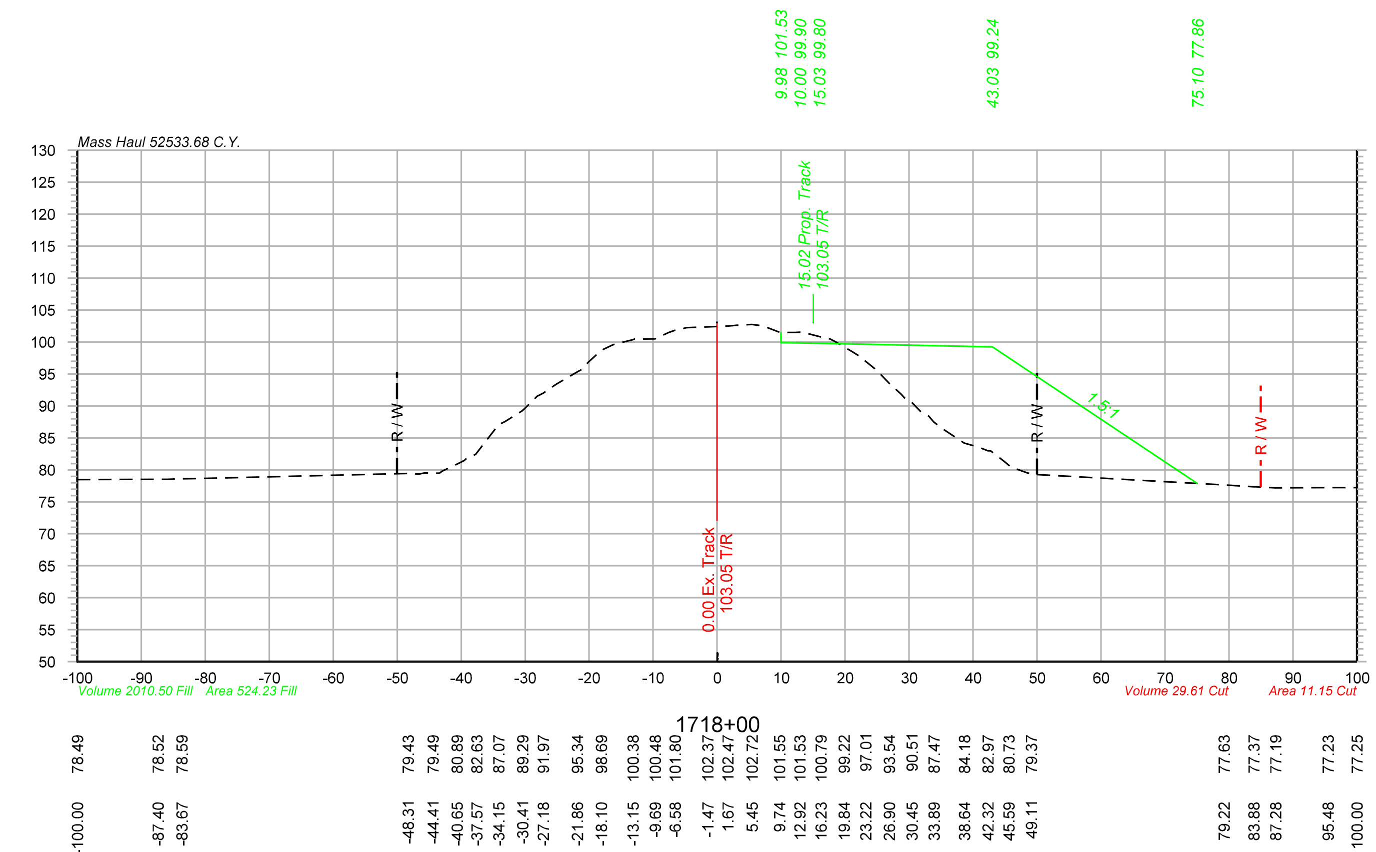
Office of Assistant Vice President
Engineering Design/Construction

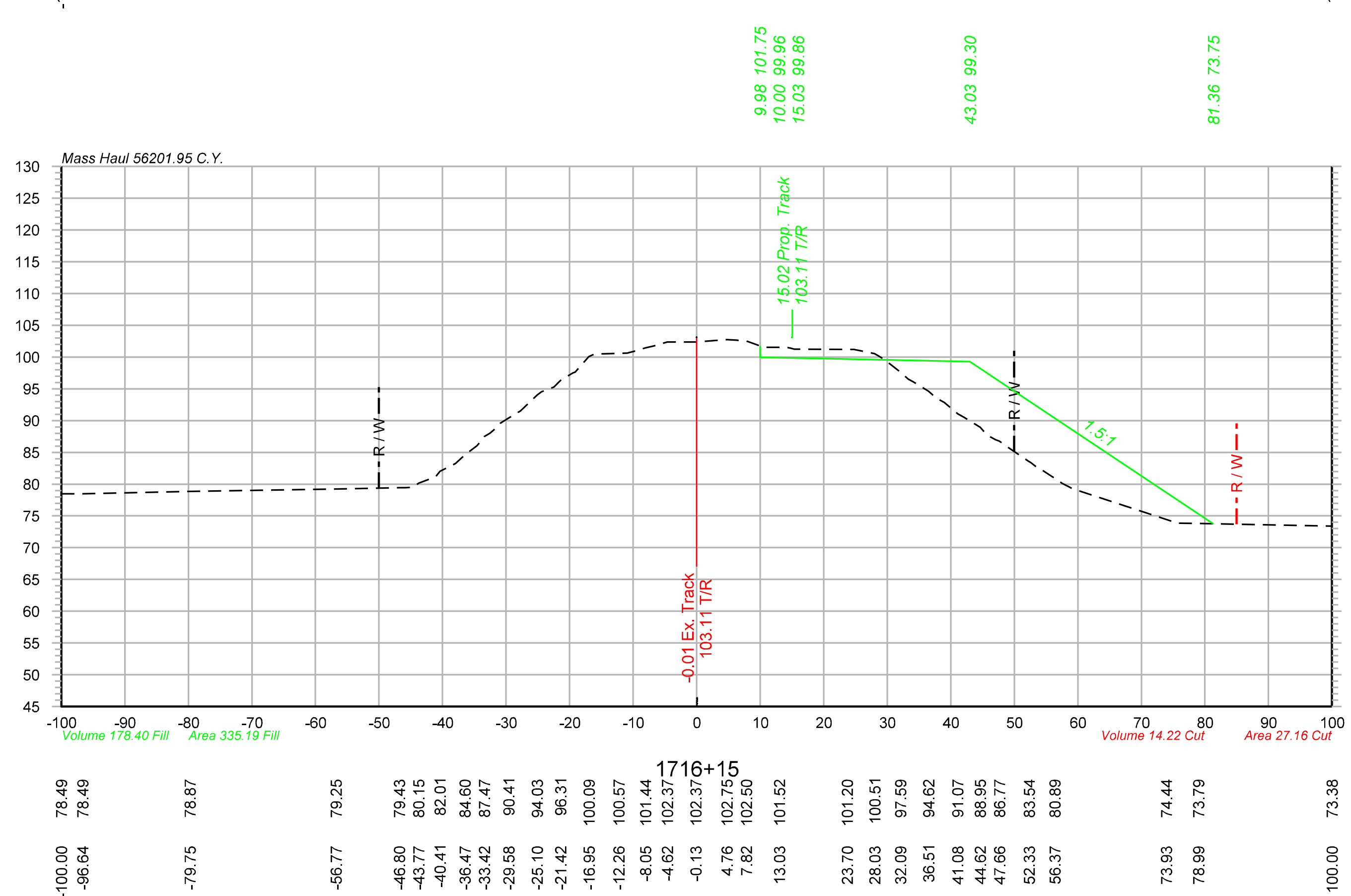
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

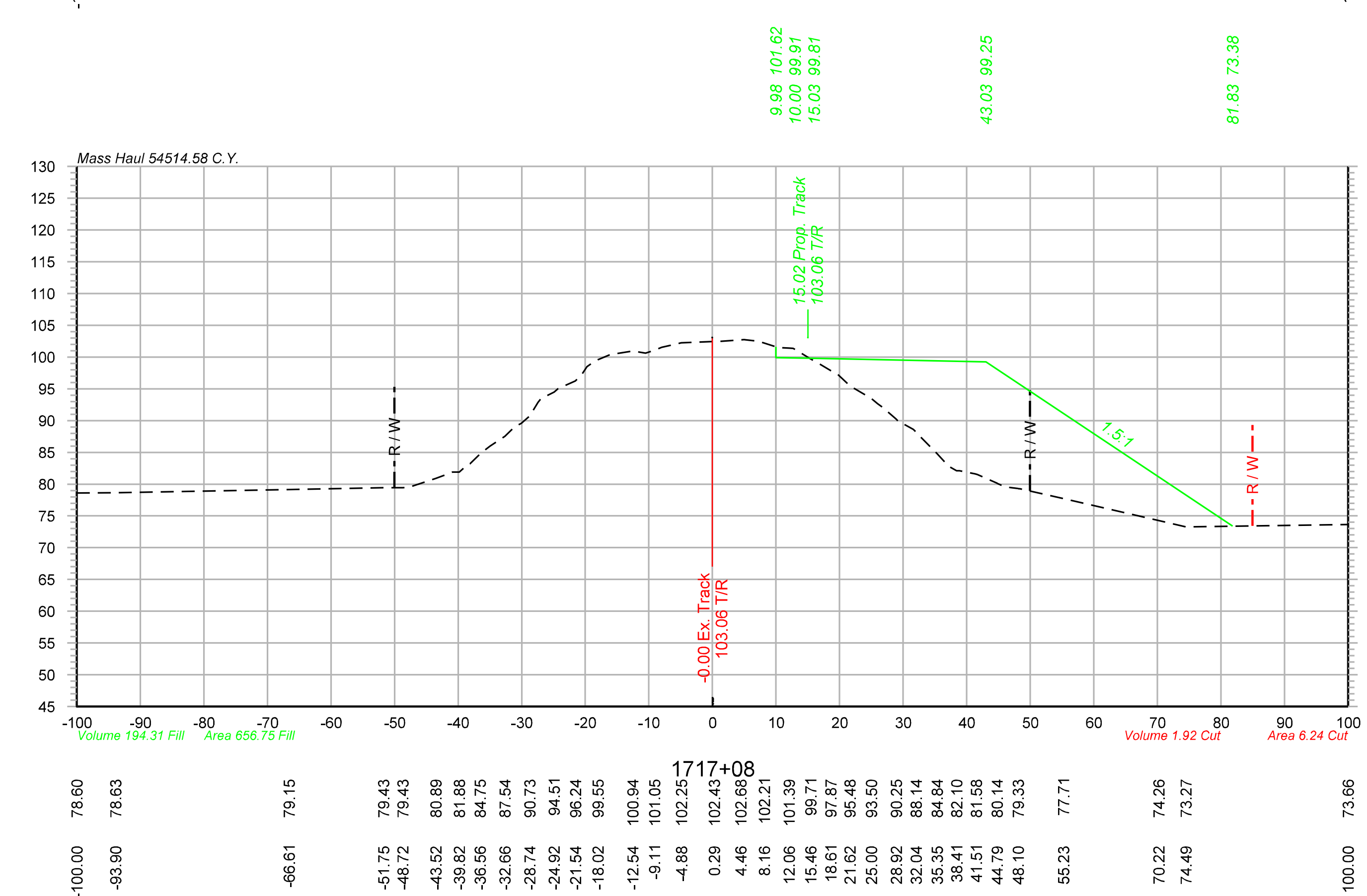
SHEET TITLE:
CROSS SECTIONS STA.1713+00 TO STA.1716+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\jparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





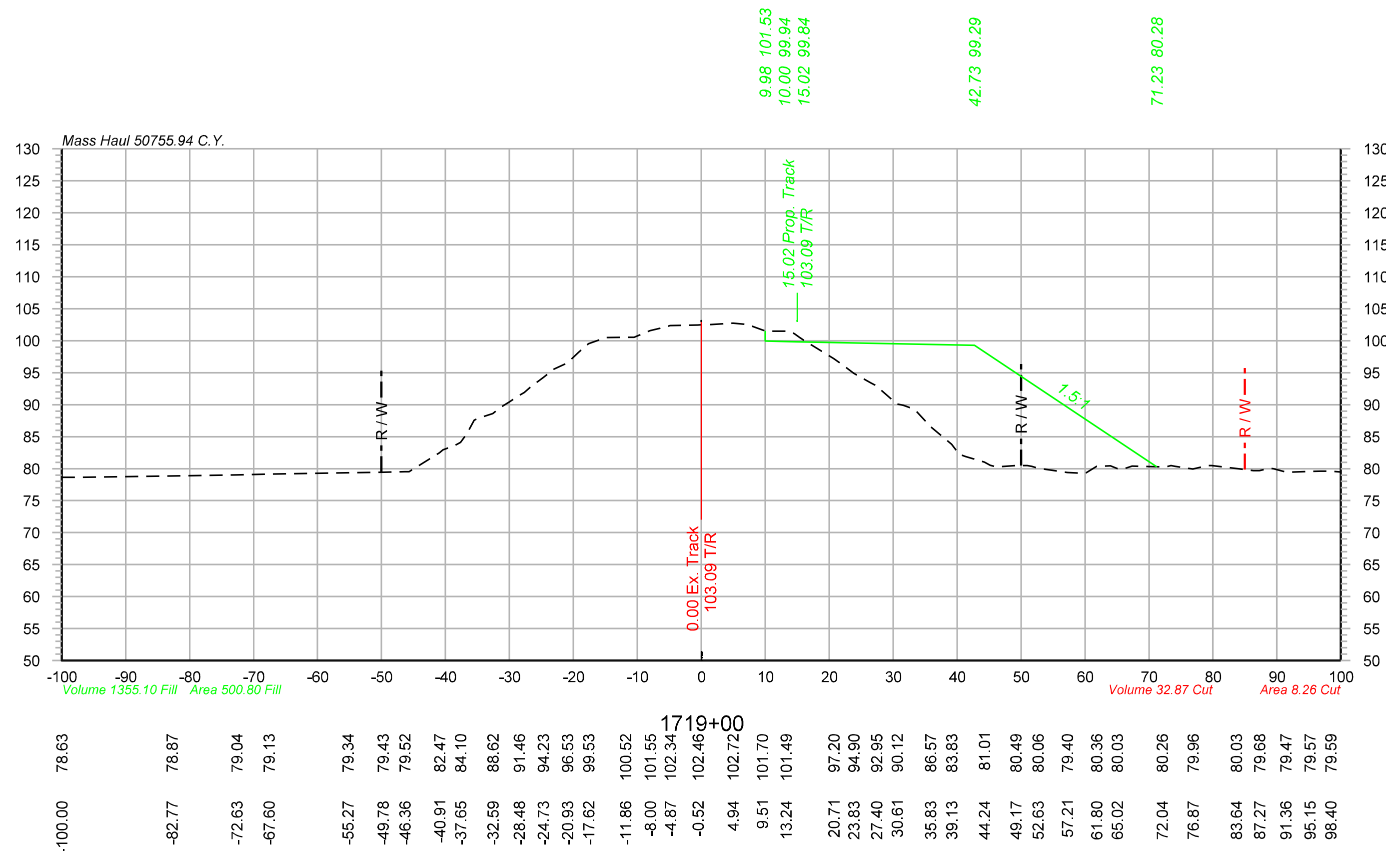


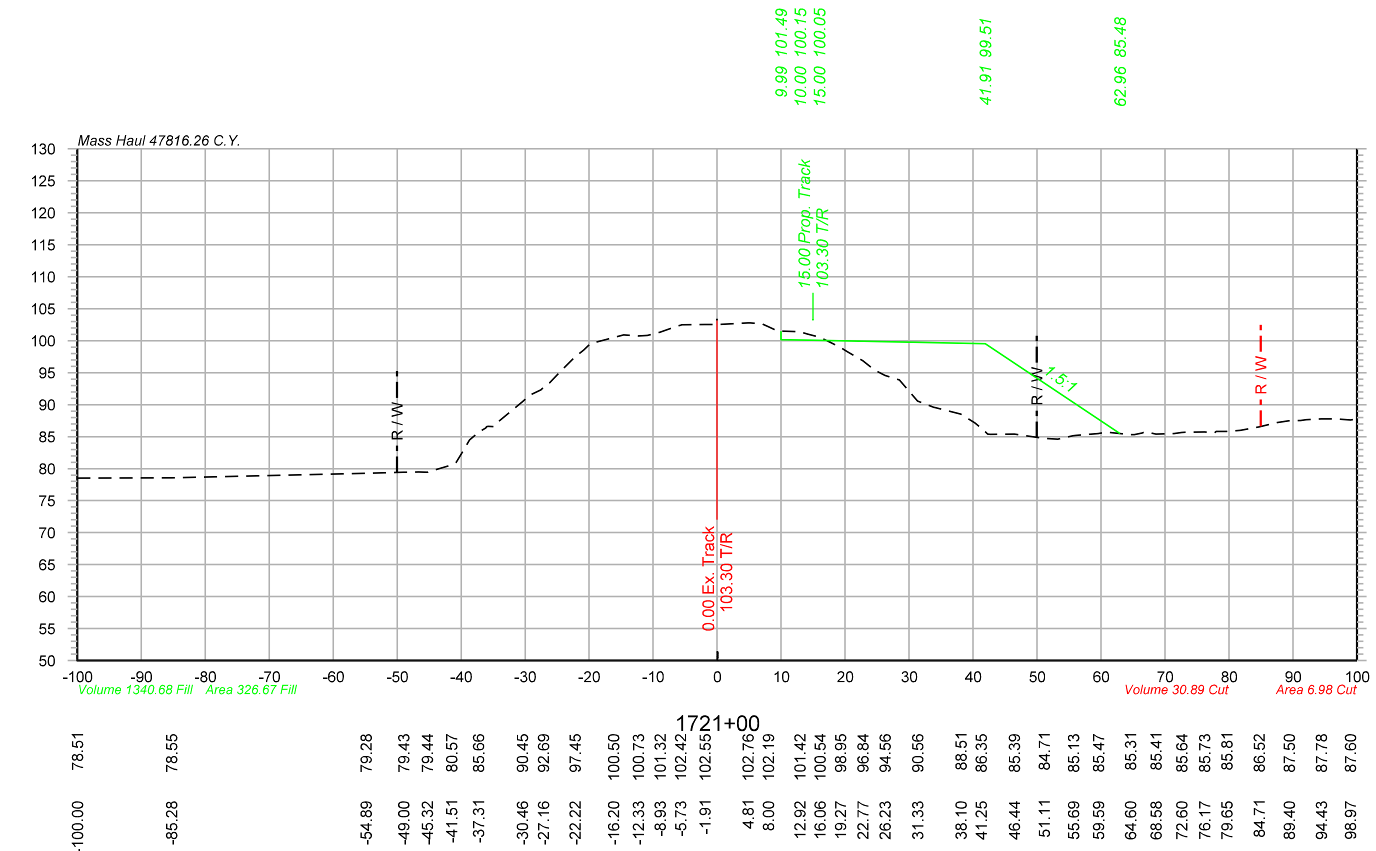


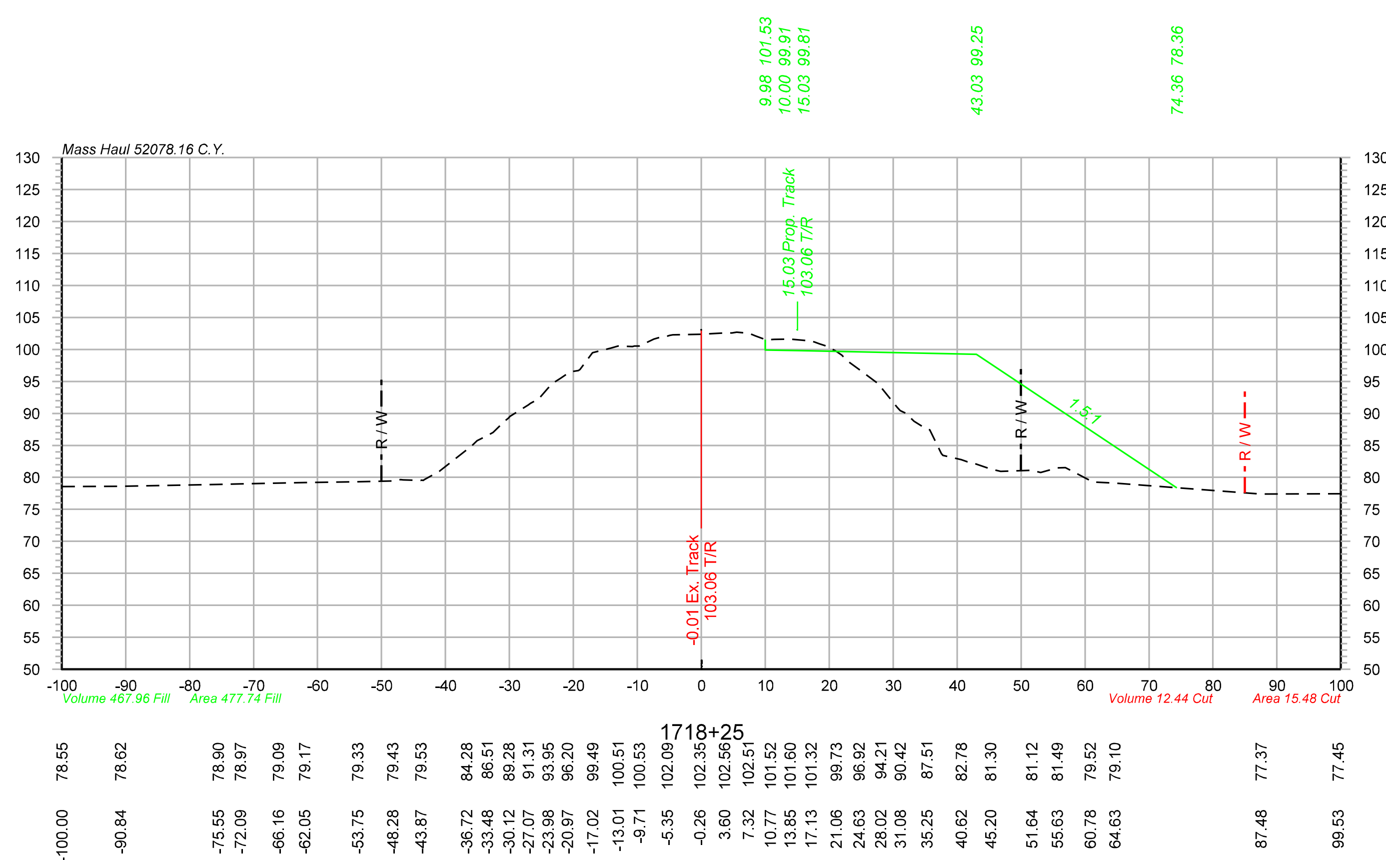
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

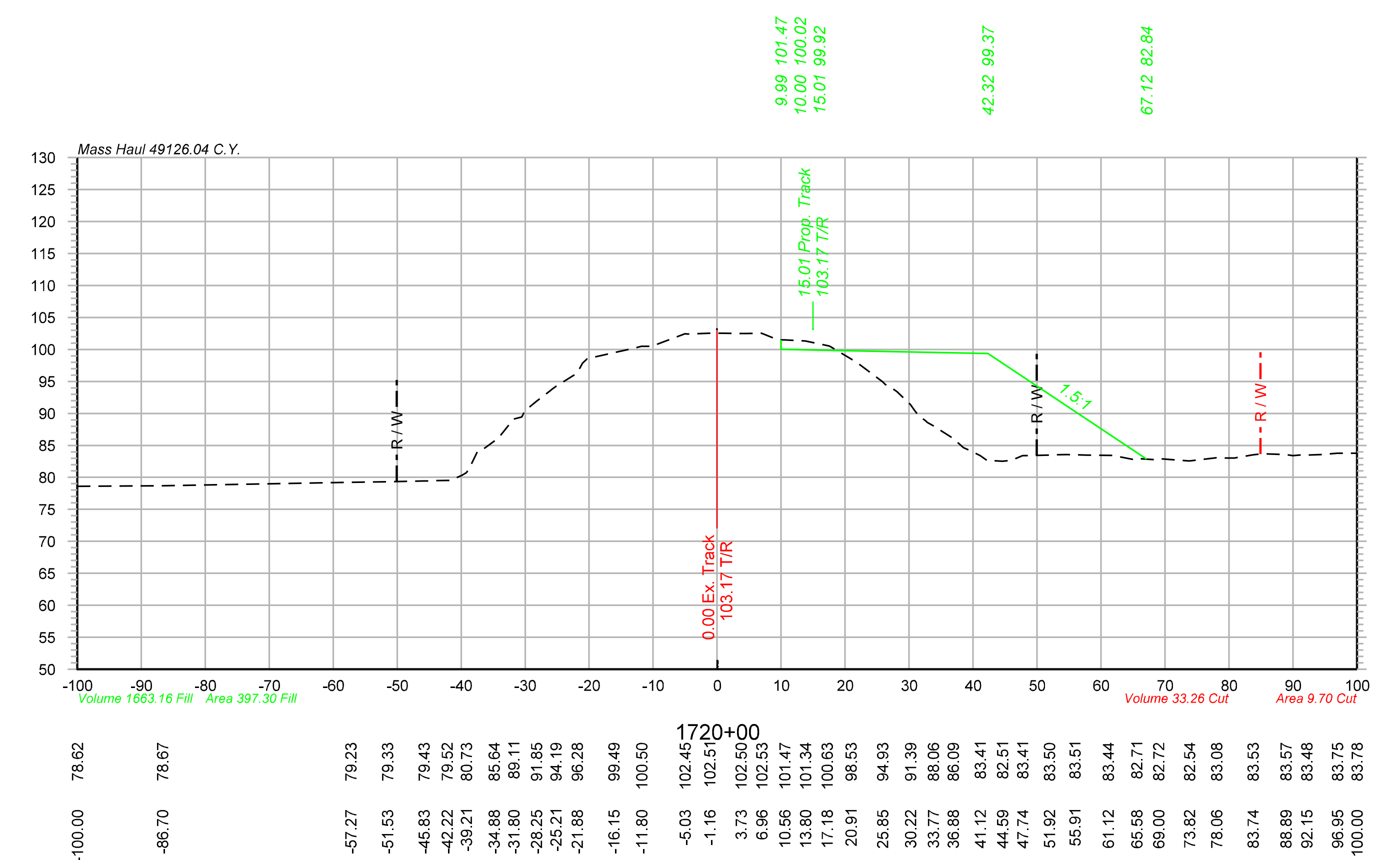
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 118 of 139	SHEET TITLE: CROSS SECTIONS STA.1716+15 TO STA.1718+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

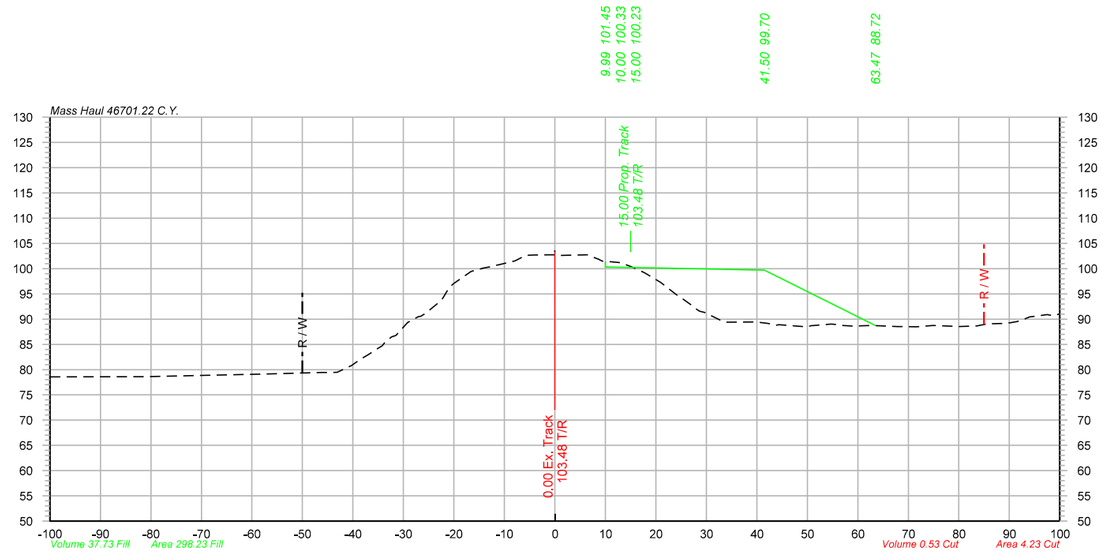
DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 119 of 139

UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

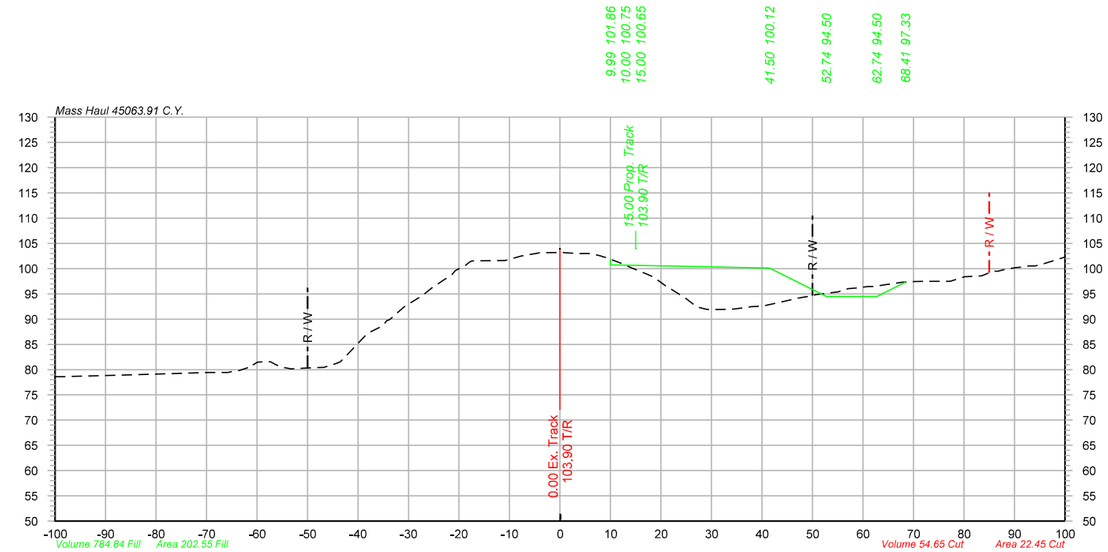
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1718+25 TO STA.1721+00



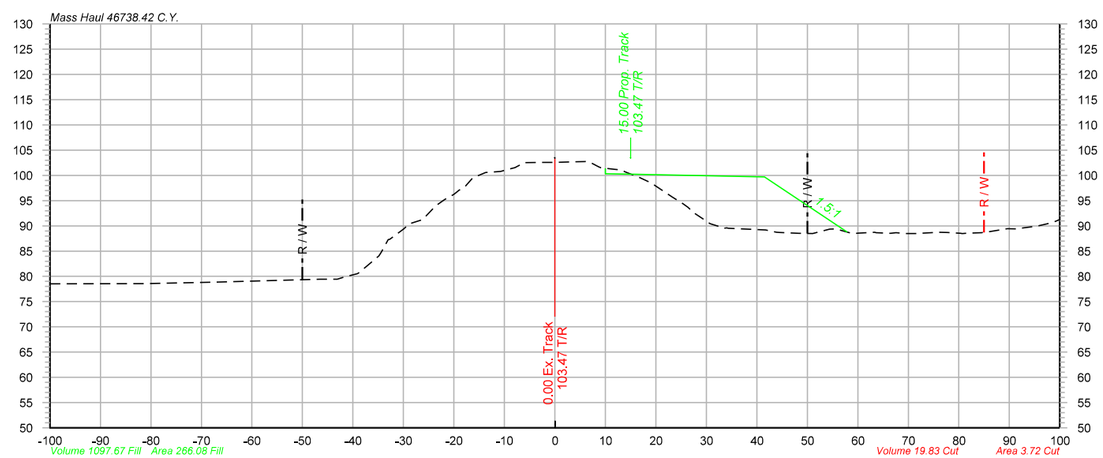
1722+04

-100.00	78.56
-81.11	78.59
-56.63	79.15
-46.24	79.43
-43.11	79.48
-38.55	82.04
-34.81	84.34
-31.46	86.76
-27.06	90.46
-23.46	92.88
-20.03	97.09
-16.59	99.45
-11.75	100.58
-7.93	101.54
-4.20	102.68
-1.07	102.74
6.41	102.72
9.42	101.50
12.88	101.20
17.13	99.49
21.00	97.24
24.09	94.80
28.28	91.83
32.70	89.82
39.80	89.44
43.79	88.78
49.18	88.51
54.75	89.03
59.28	88.59
62.49	88.73
67.86	88.54
71.64	88.50
74.73	88.75
79.41	88.55
83.29	88.65
89.05	89.15
92.84	89.94
97.49	90.91



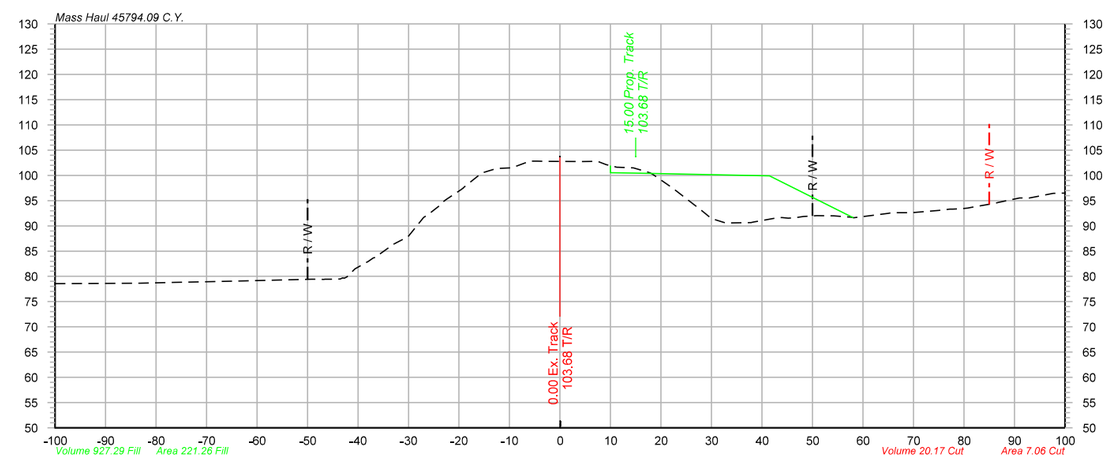
1724+00

-100.00	78.61
-95.70	78.69
-87.51	78.90
-69.47	79.43
-66.37	79.43
-63.34	79.91
-59.89	81.50
-56.26	80.97
-48.60	80.39
-44.17	81.26
-38.14	87.15
-34.96	88.91
-30.85	92.42
-27.29	94.65
-21.34	98.85
-17.95	101.26
-10.91	101.60
-7.73	102.50
-4.39	103.07
0.34	103.20
3.58	103.00
8.16	102.50
12.29	101.00
17.53	98.80
21.68	96.00
24.91	94.12
28.99	91.95
32.85	91.96
36.98	92.33
40.17	92.62
44.42	93.54
49.10	94.48
55.14	95.42
59.06	96.19
62.38	96.49
66.53	97.13
70.11	97.46
75.86	97.50
80.18	98.39
83.50	98.56
86.72	99.48
90.58	100.25
94.08	100.53
97.47	101.50



1722+00

-100.00	78.52
-81.26	78.54
-67.36	78.86
-46.49	79.43
-43.08	79.42
-39.15	80.51
-34.86	84.06
-29.93	89.41
-26.23	91.22
-21.78	95.21
-17.70	97.85
-13.72	100.56
-9.26	101.21
-6.03	102.51
-2.51	102.57
4.09	102.69
7.16	102.50
11.85	101.21
16.88	99.54
23.35	95.63
27.55	92.56
30.70	90.43
33.75	89.56
41.72	89.20
48.35	88.51
54.44	89.35
58.75	88.53
63.34	88.74
66.43	88.51
69.45	88.47
76.03	88.75
80.45	88.52
84.51	88.63
89.63	89.43
94.45	89.82
97.80	90.47



1723+00

-100.00	78.56
-83.24	78.64
-76.29	78.80
-69.96	78.95
-62.45	79.12
-49.14	79.43
-45.40	79.43
-42.21	79.90
-37.93	82.98
-33.00	86.35
-27.01	91.66
-23.56	94.24
-19.58	97.21
-15.70	100.33
-12.56	101.37
-9.55	101.49
-6.20	102.72
-2.97	102.79
4.49	102.72
8.55	102.36
14.54	101.50
17.87	100.51
21.81	97.83
27.38	93.55
30.95	91.16
35.24	90.62
38.36	90.79
42.60	91.51
46.54	91.60
50.87	92.03
54.25	92.00
57.52	91.72
61.12	91.98
65.03	92.50
68.53	92.63
75.58	93.10
79.46	93.41
86.17	94.50
91.00	95.53
95.14	95.96
99.70	96.49

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 120 of 139

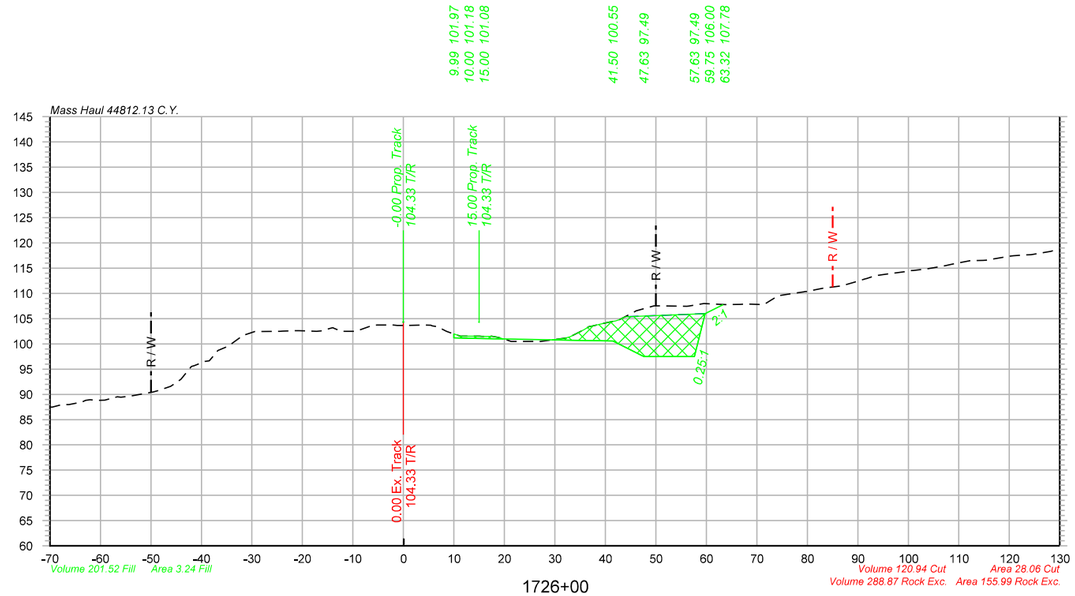
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

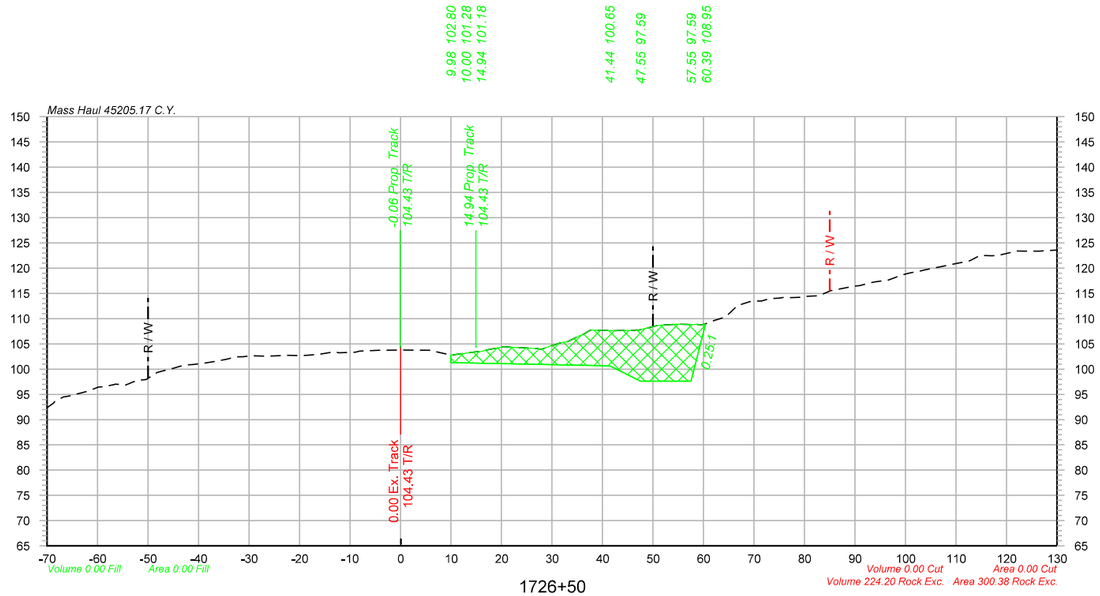
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1722+00 TO STA.1724+00

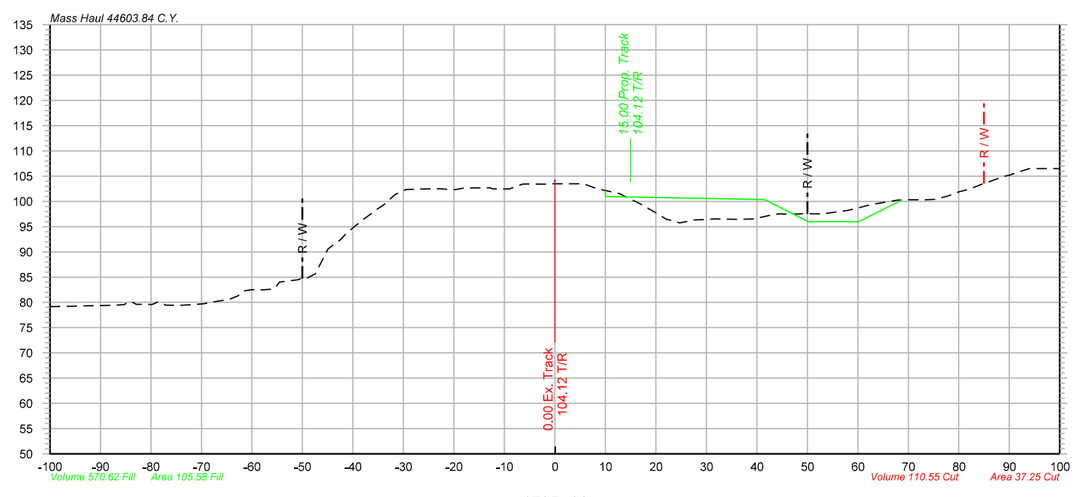
Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\wpsrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



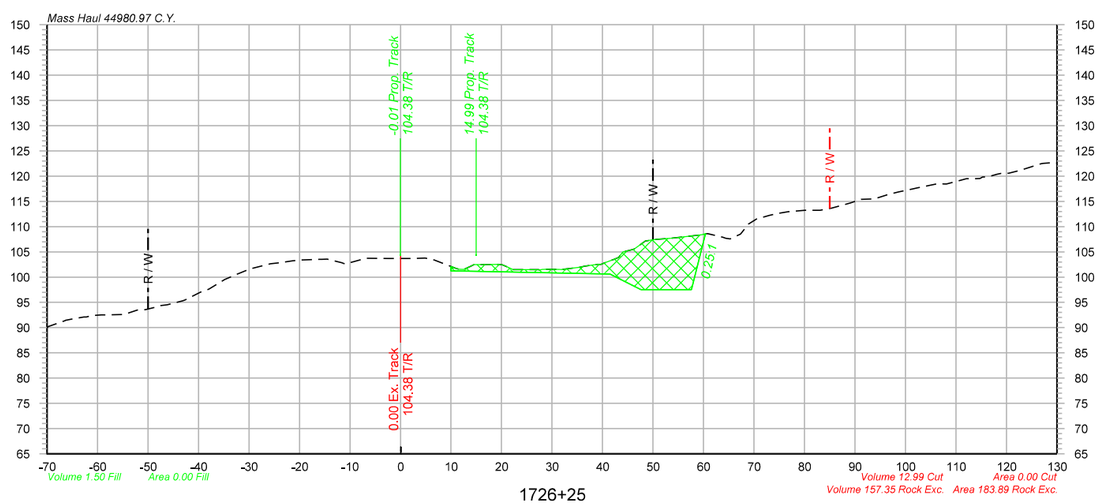
1726+00



1726+50



1725+00



1726+25

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2810
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 121 of 139

UNION PACIFIC RAILROAD

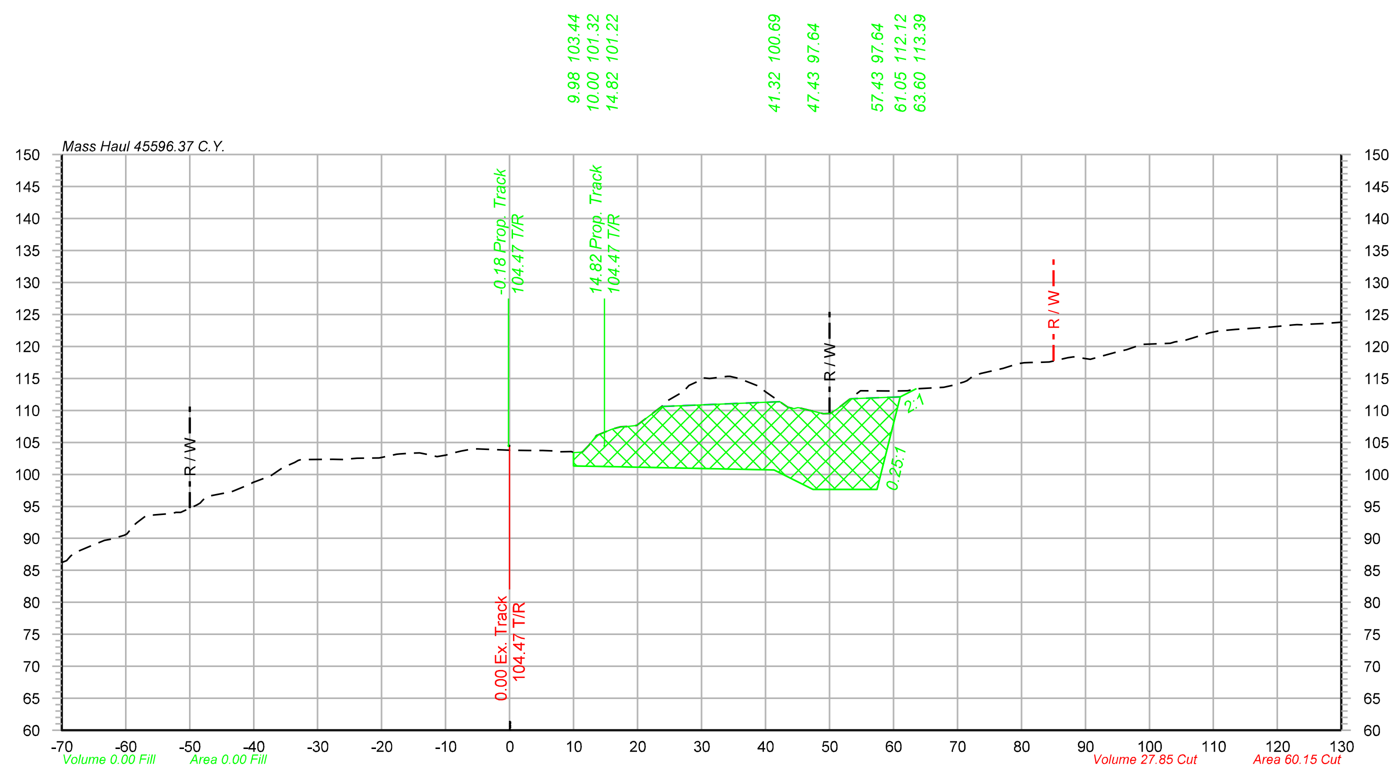
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1725+00 TO STA.1726+50

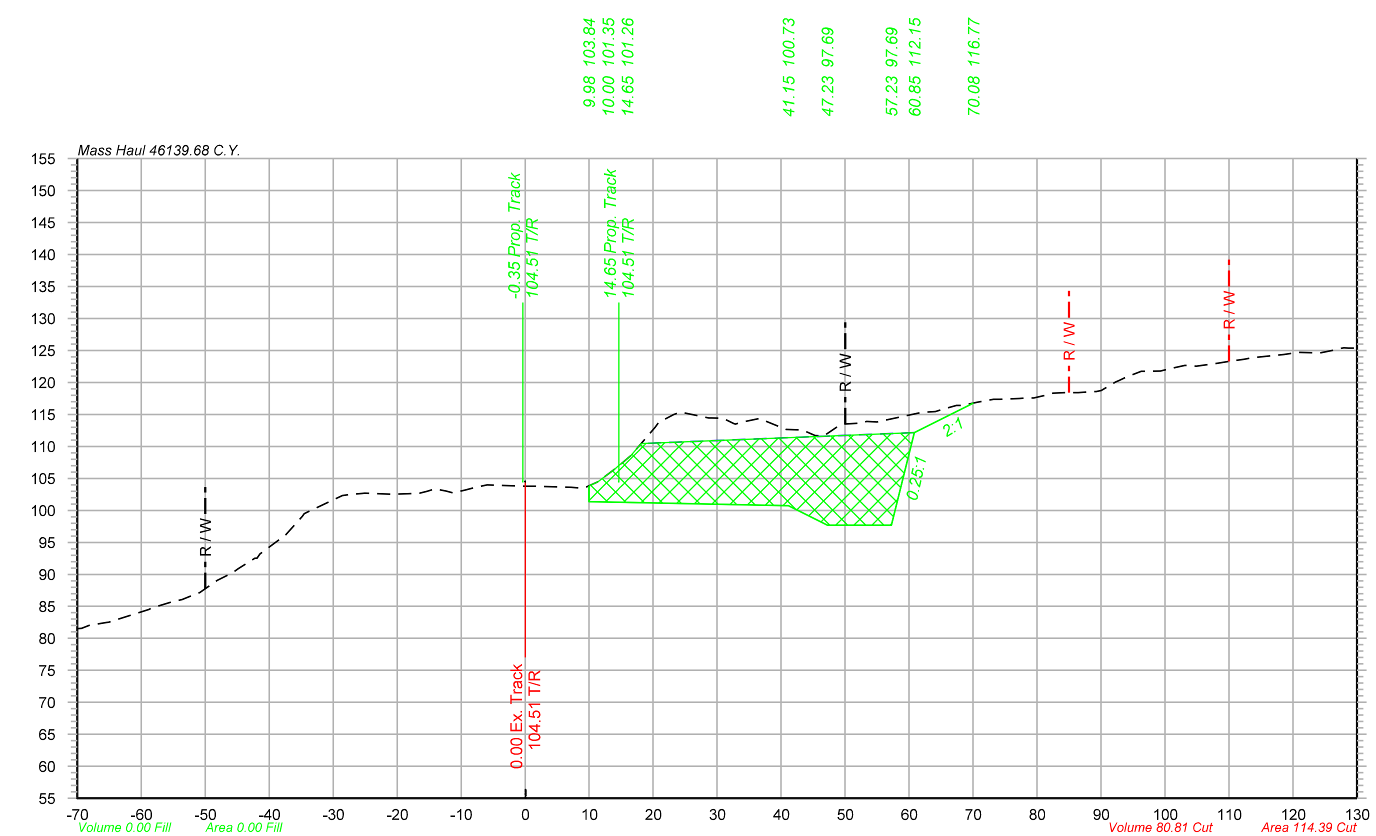
Color table: F:\PROJECTS\Oli-I345\color\UPRR.tbl
\\omhe55773\ipgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\Oli-I345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



1726+75

Elevation	Offset
86.23	-70.00
88.78	-65.57
89.86	-62.42
92.12	-58.64
93.91	-52.68
95.19	-48.93
97.13	-44.19
98.24	-41.15
99.58	-37.90
101.85	-33.61
102.36	-27.59
102.51	-23.84
102.57	-20.40
103.17	-17.23
103.36	-14.05
103.04	-9.90
103.96	-5.96
103.77	0.06
103.73	5.18
103.56	9.67
106.06	13.59
107.44	17.35
110.82	24.04
112.96	27.18
115.07	30.47
115.33	34.06
113.92	38.64
110.48	43.52
109.48	49.05
113.05	54.84
113.04	60.26
113.38	63.32
113.62	67.85
114.46	71.03
116.55	77.15
117.45	80.38
117.57	84.34
118.35	88.09
119.19	95.14
120.27	98.74
120.50	103.25
122.12	109.37
122.64	113.44
123.04	119.02
123.35	122.51
123.59	127.20



1727+00

Elevation	Offset
81.52	-70.00
82.46	-65.47
84.50	-58.81
85.72	-55.11
87.16	-50.86
90.20	-45.87
92.52	-42.23
95.11	-38.86
99.06	-34.83
102.32	-28.57
102.67	-25.45
102.52	-20.84
102.68	-16.49
103.03	-12.34
103.17	-9.31
104.00	-5.95
103.79	-0.05
103.61	7.19
104.47	11.38
107.58	15.34
112.98	20.33
115.37	24.26
114.75	27.27
114.40	30.89
114.36	36.60
112.65	40.79
111.68	45.31
113.32	49.18
113.67	52.63
115.31	62.00
115.80	65.33
116.89	70.67
117.37	74.21
117.50	77.25
117.94	81.12
118.42	84.29
118.59	88.75
120.09	92.29
121.72	96.31
121.78	99.32
122.68	103.10
122.98	108.19
123.62	112.34
124.37	118.60
124.61	123.97
125.20	127.13

Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

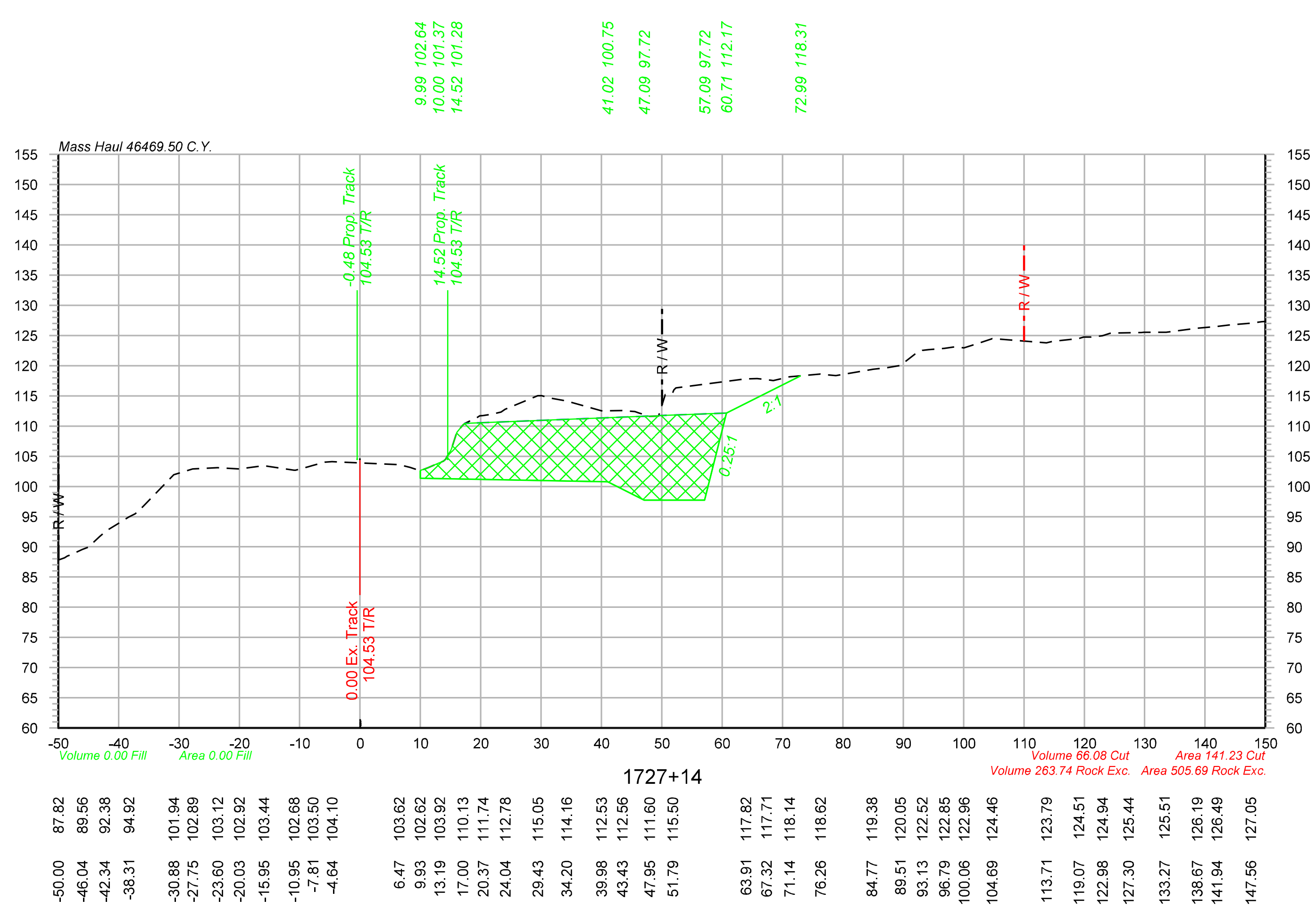
DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 122 of 139

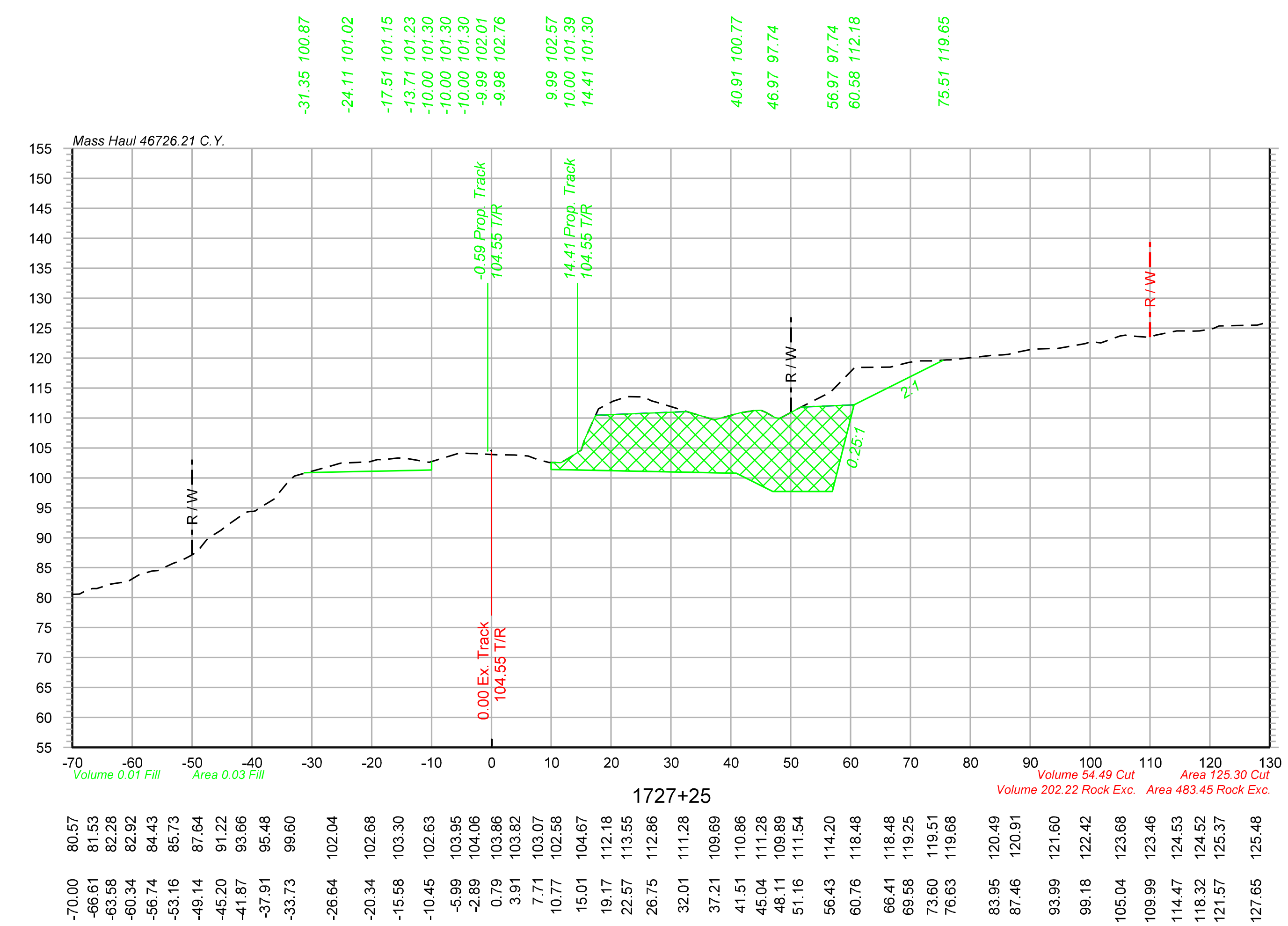
UNION PACIFIC RAILROAD
Office of Assistant Vice President Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1726+75 TO STA.1727+00

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



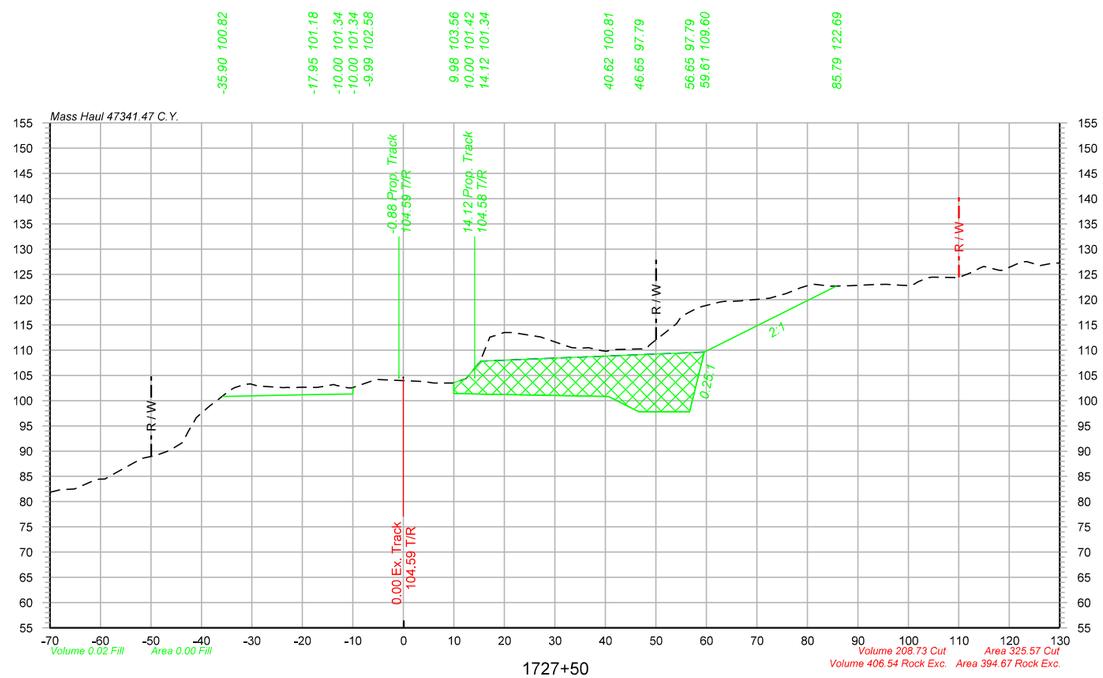


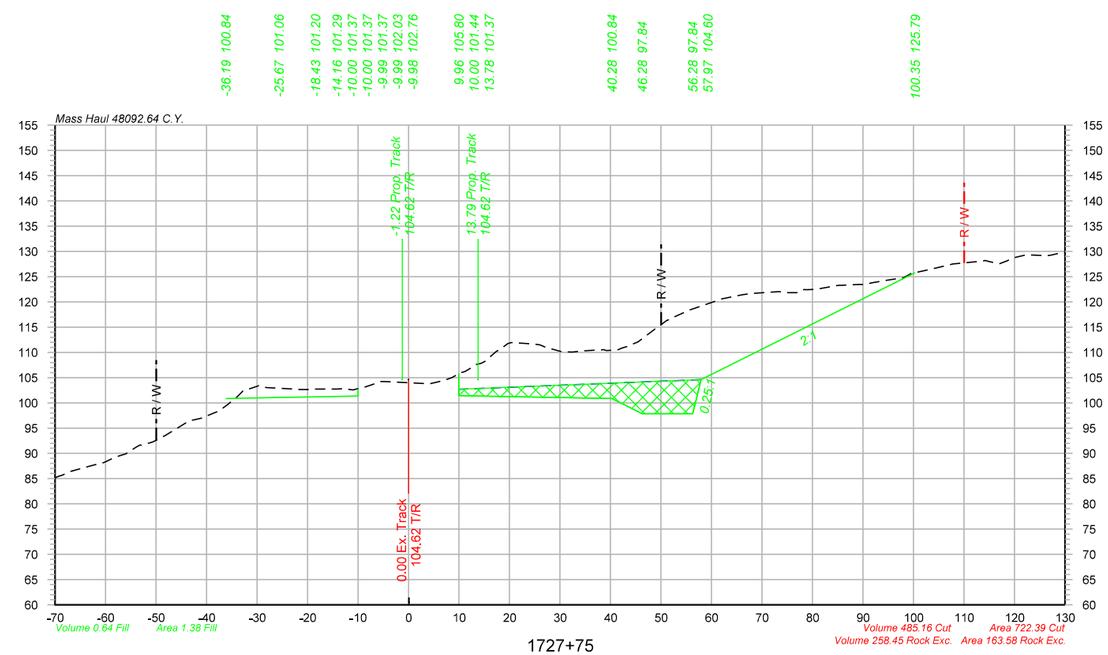
Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200, Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 123 of 139	SHEET TITLE: CROSS SECTIONS STA.1727+14 TO STA.1727+25





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 124 of 139

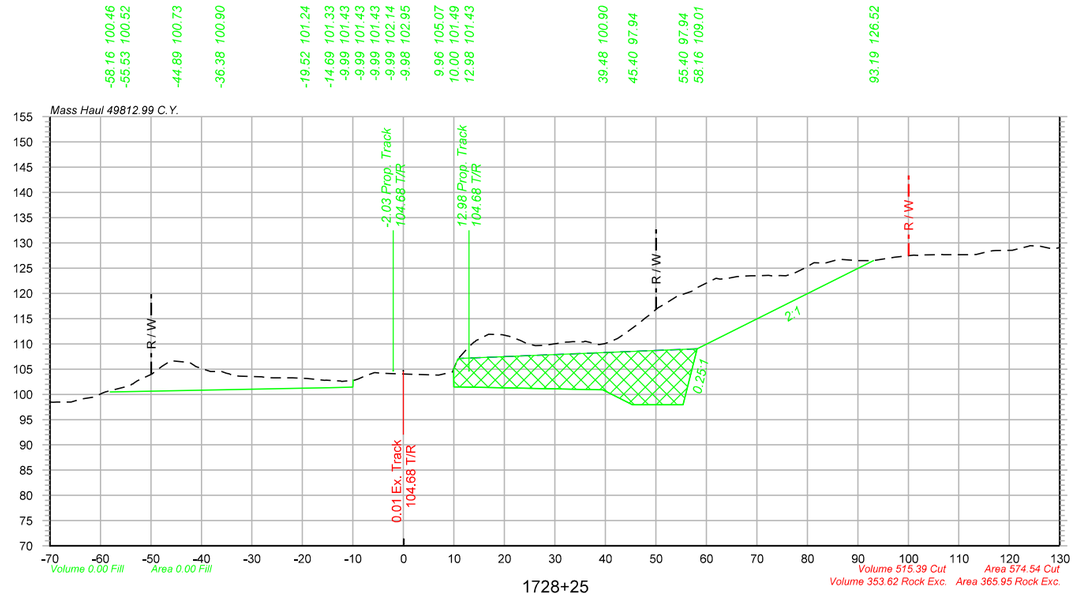
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

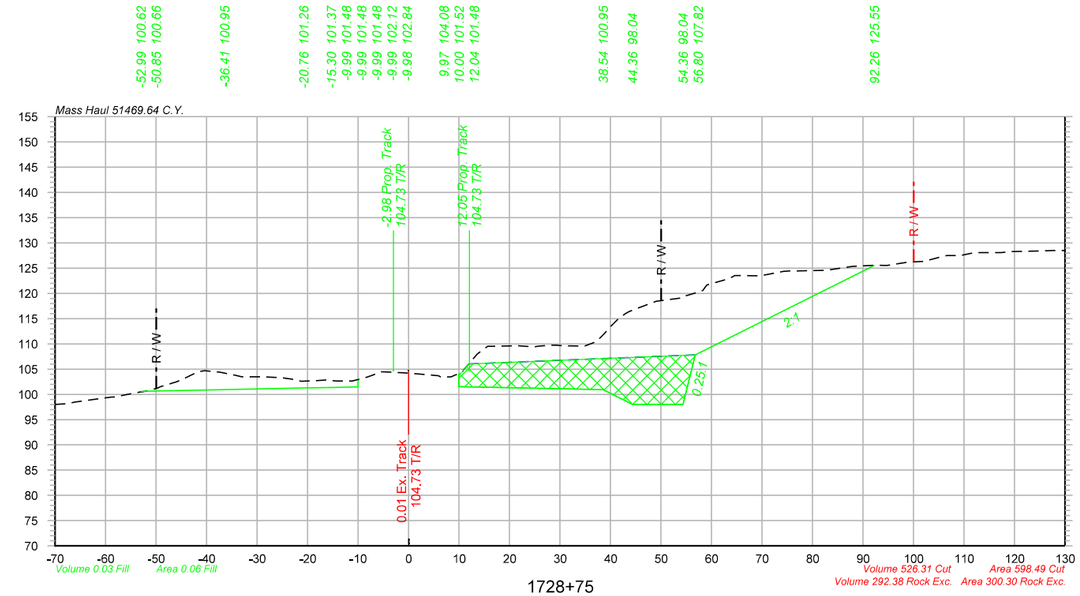
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1727+50 TO STA.1727+75

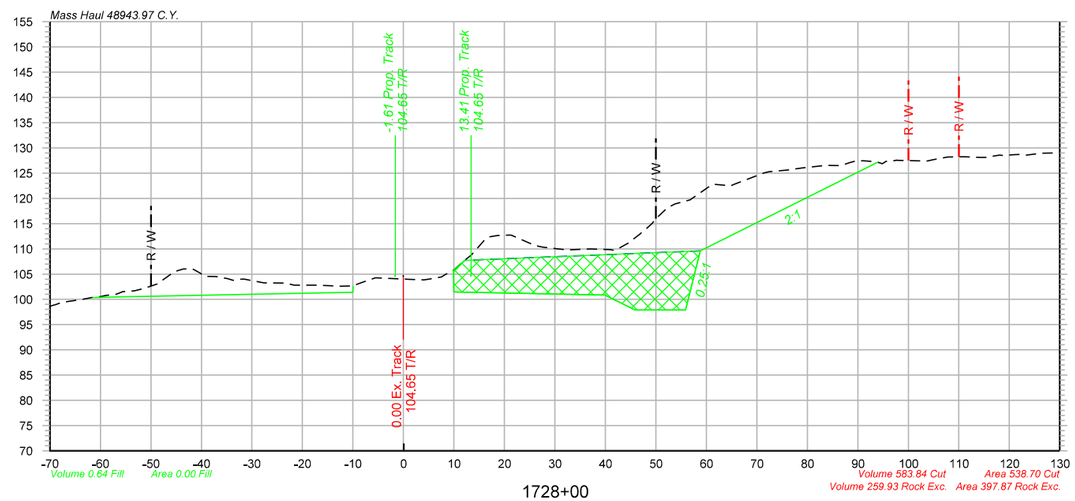
Color table:F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\upprm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-X5.dgn
Default
10/20/2014



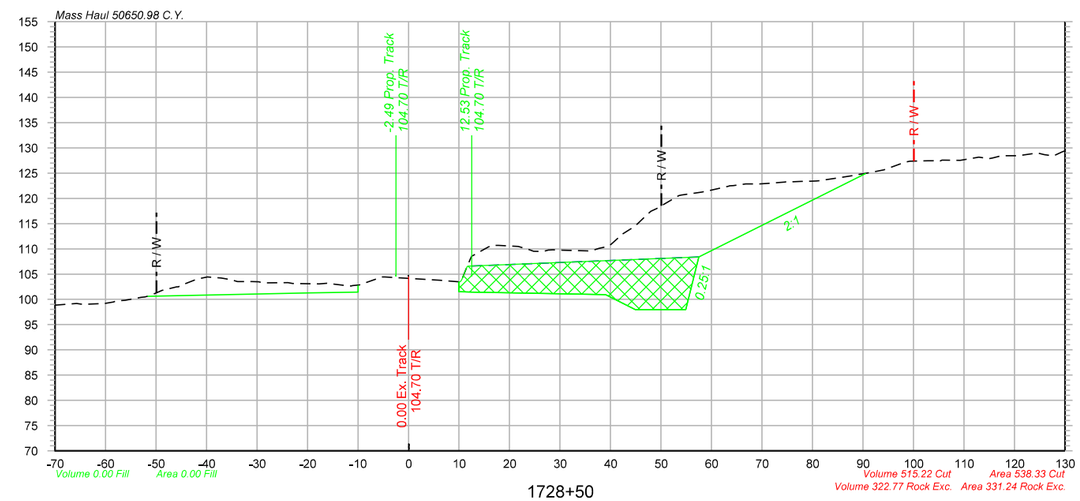
1728+25



1728+75



1728+00



1728+50

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 125 of 139

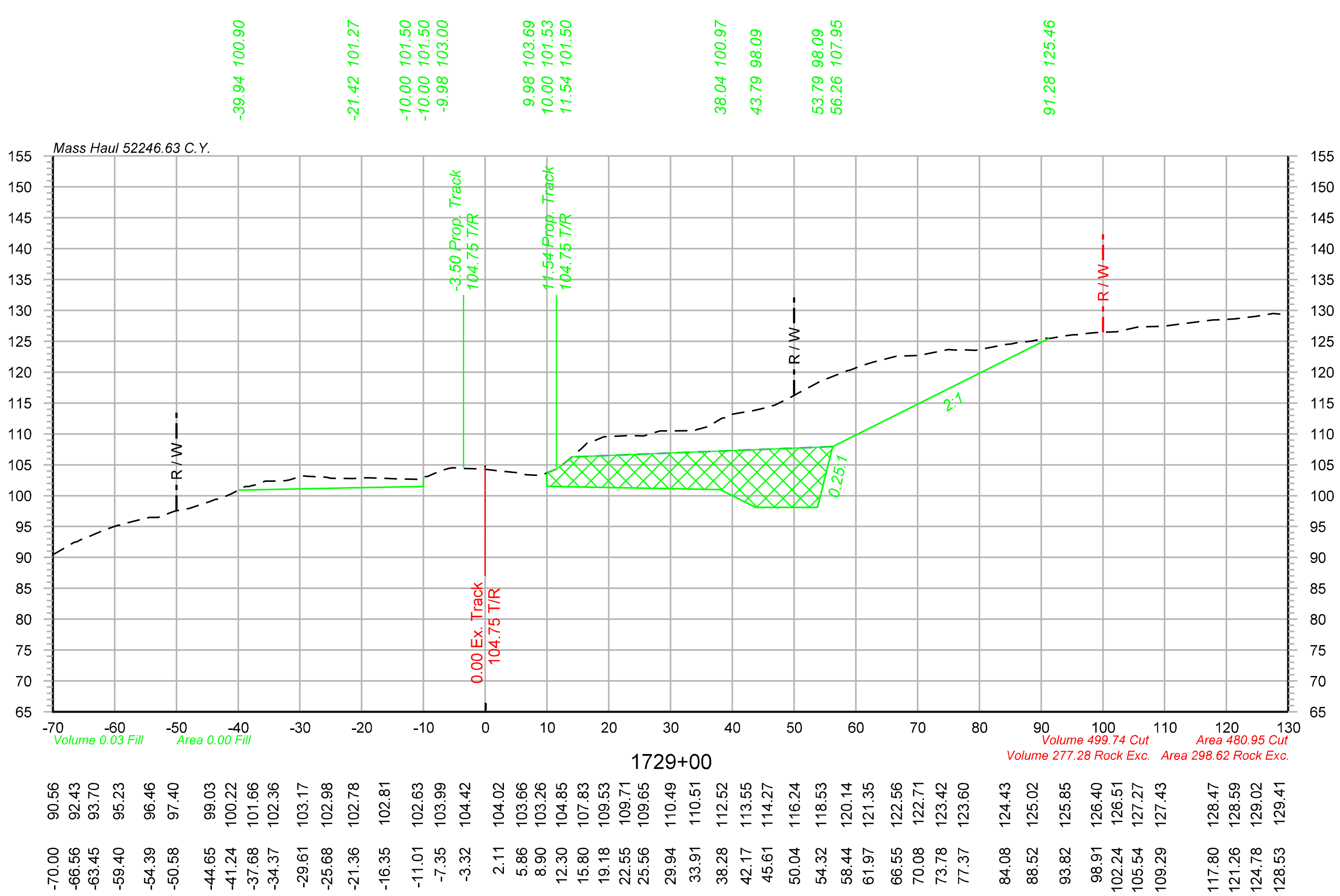
UNION PACIFIC RAILROAD

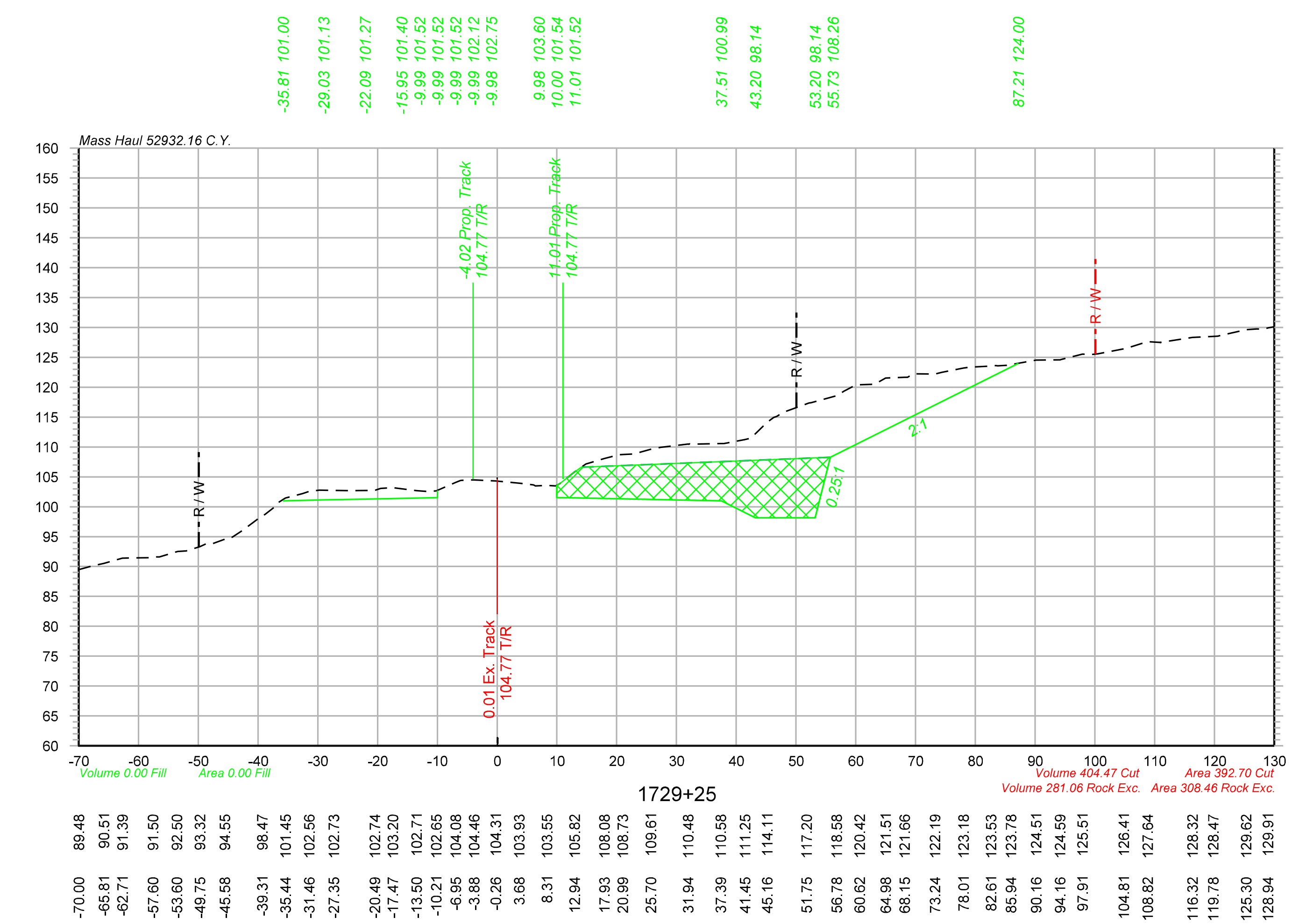
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1728+00 TO STA.1728+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhe55773\ipam\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

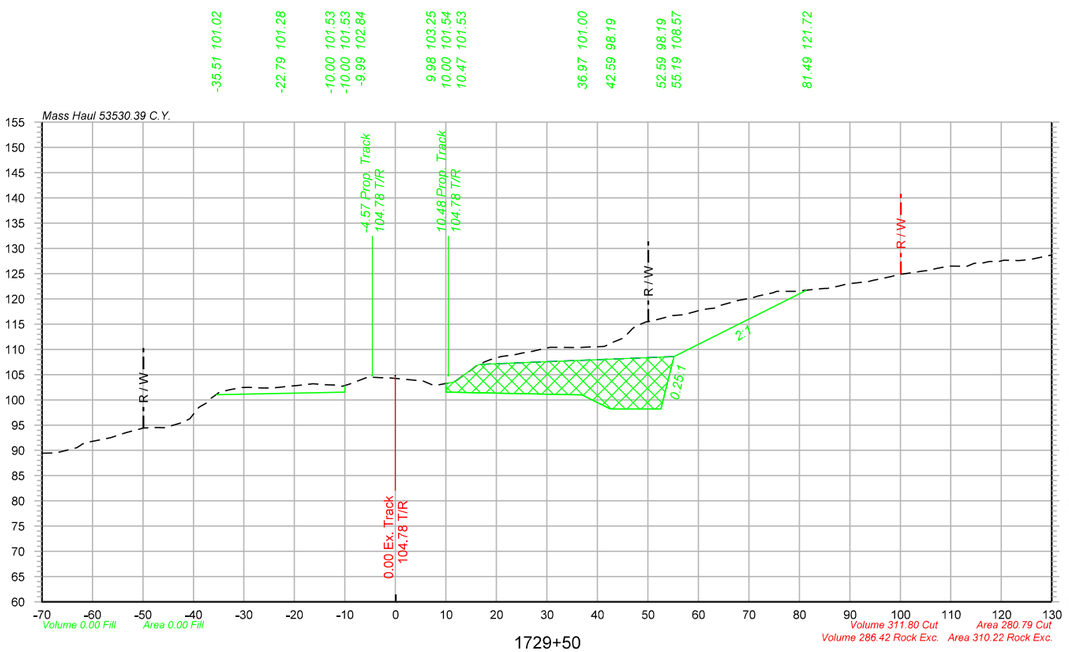
Assumed Rock Excavation

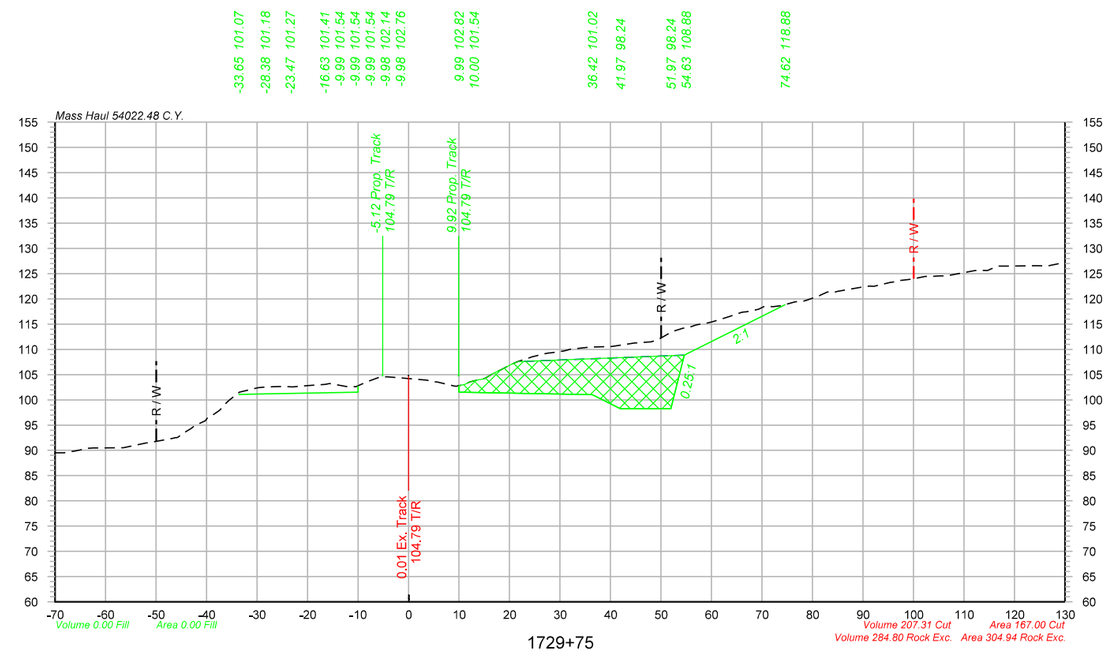
OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 126 of 139	SHEET TITLE: CROSS SECTIONS STA.1729+00 TO STA.1729+25

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 127 of 139

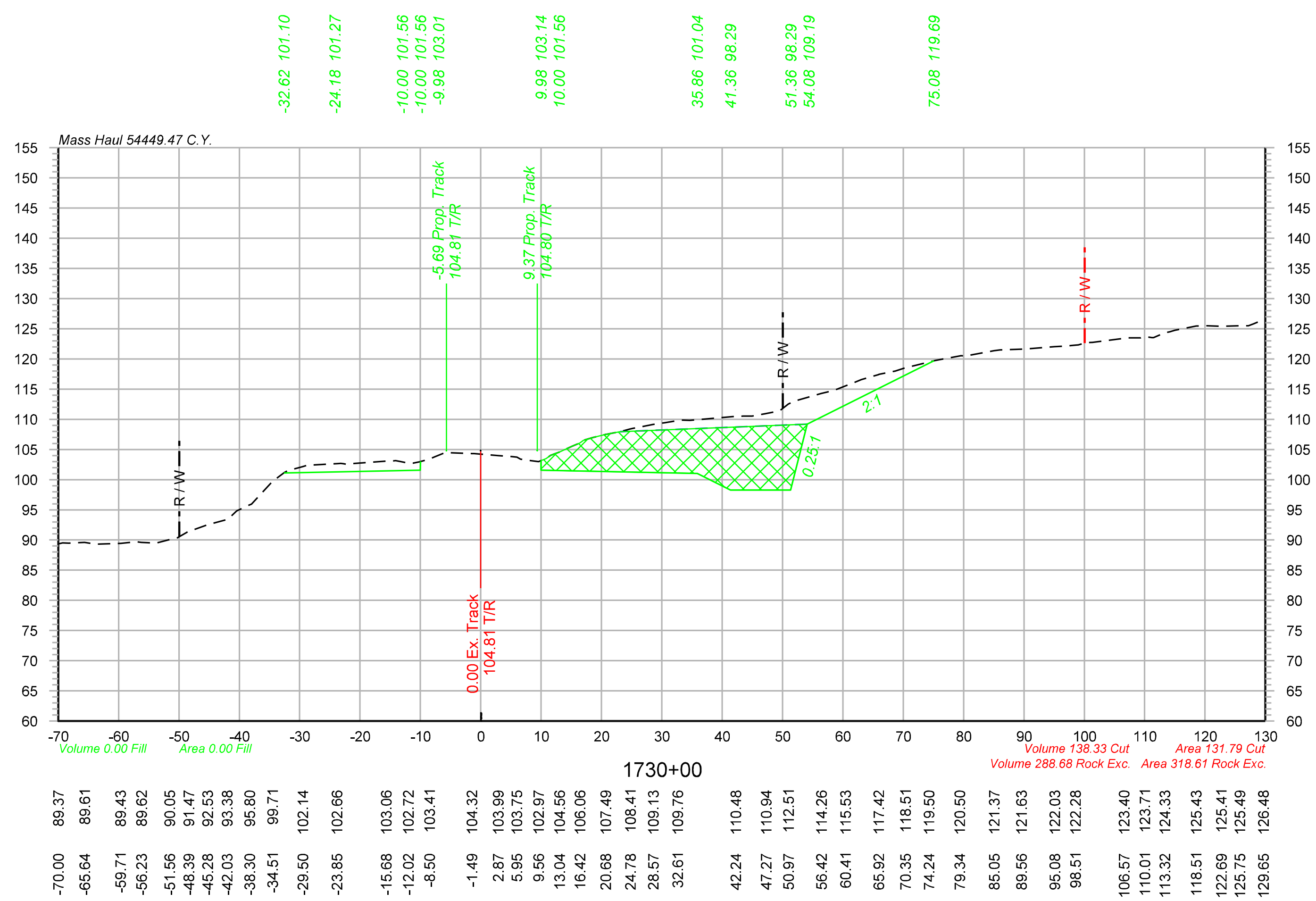
UNION PACIFIC RAILROAD

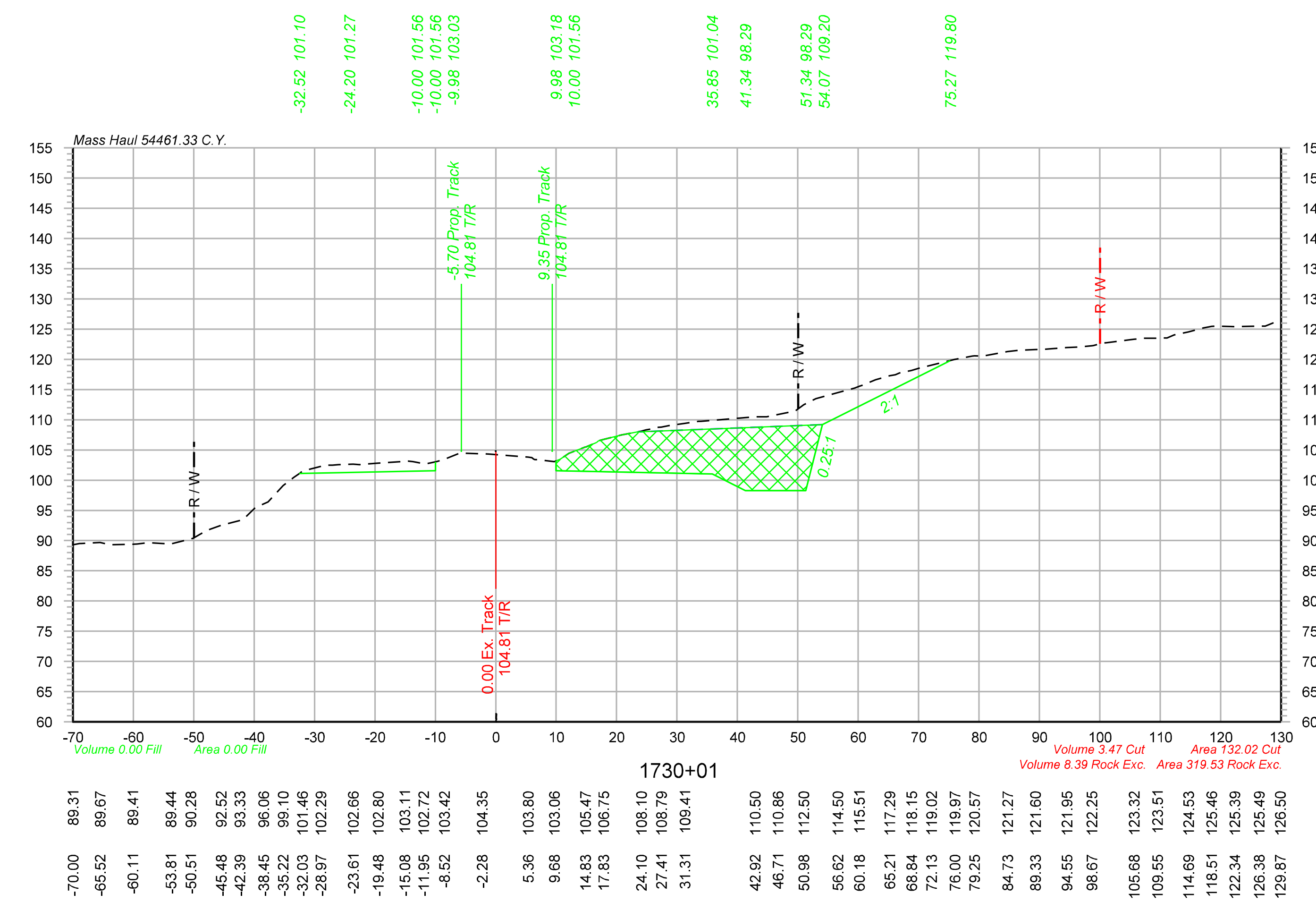
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1729+50 TO STA.1729+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\uparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

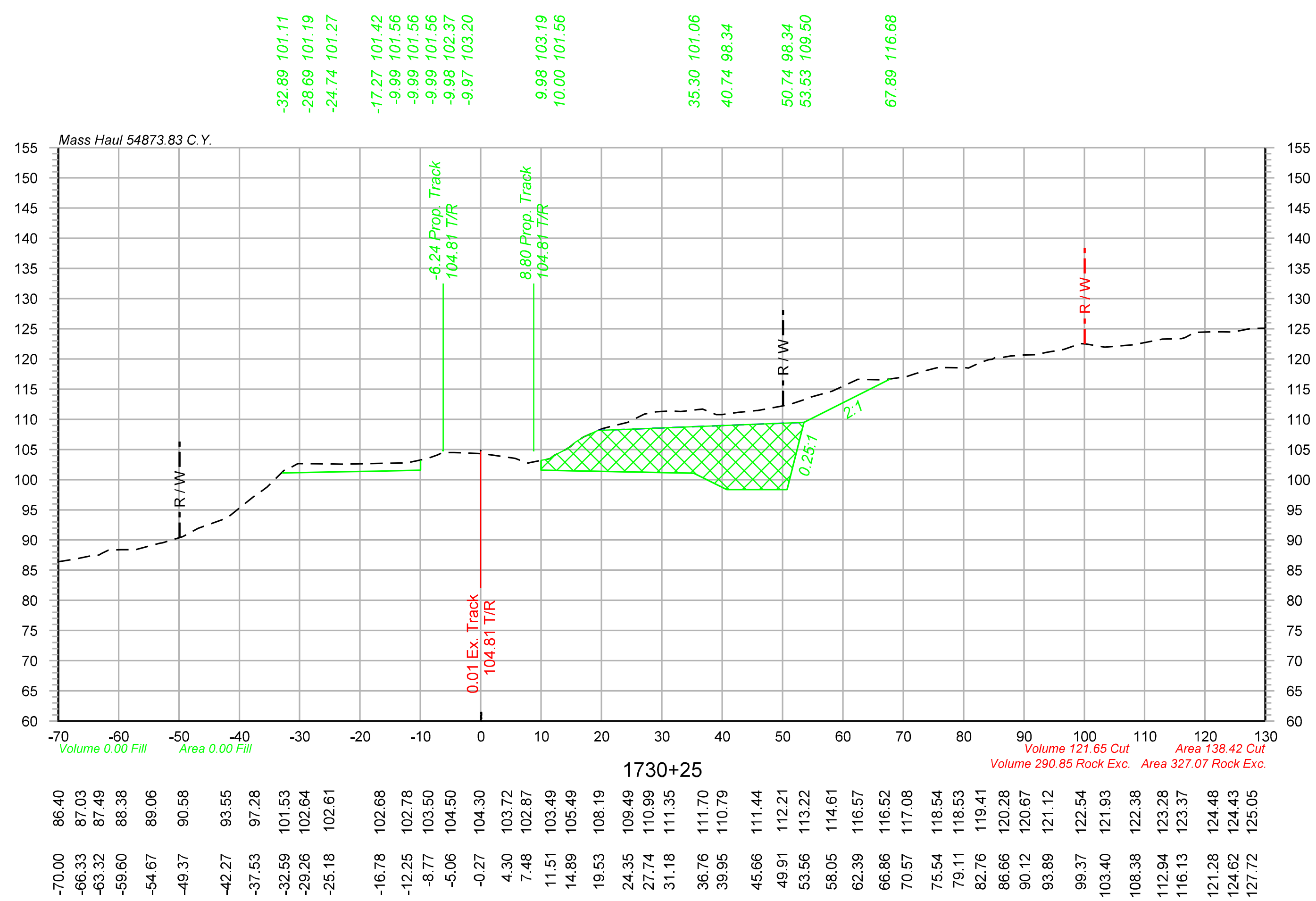
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

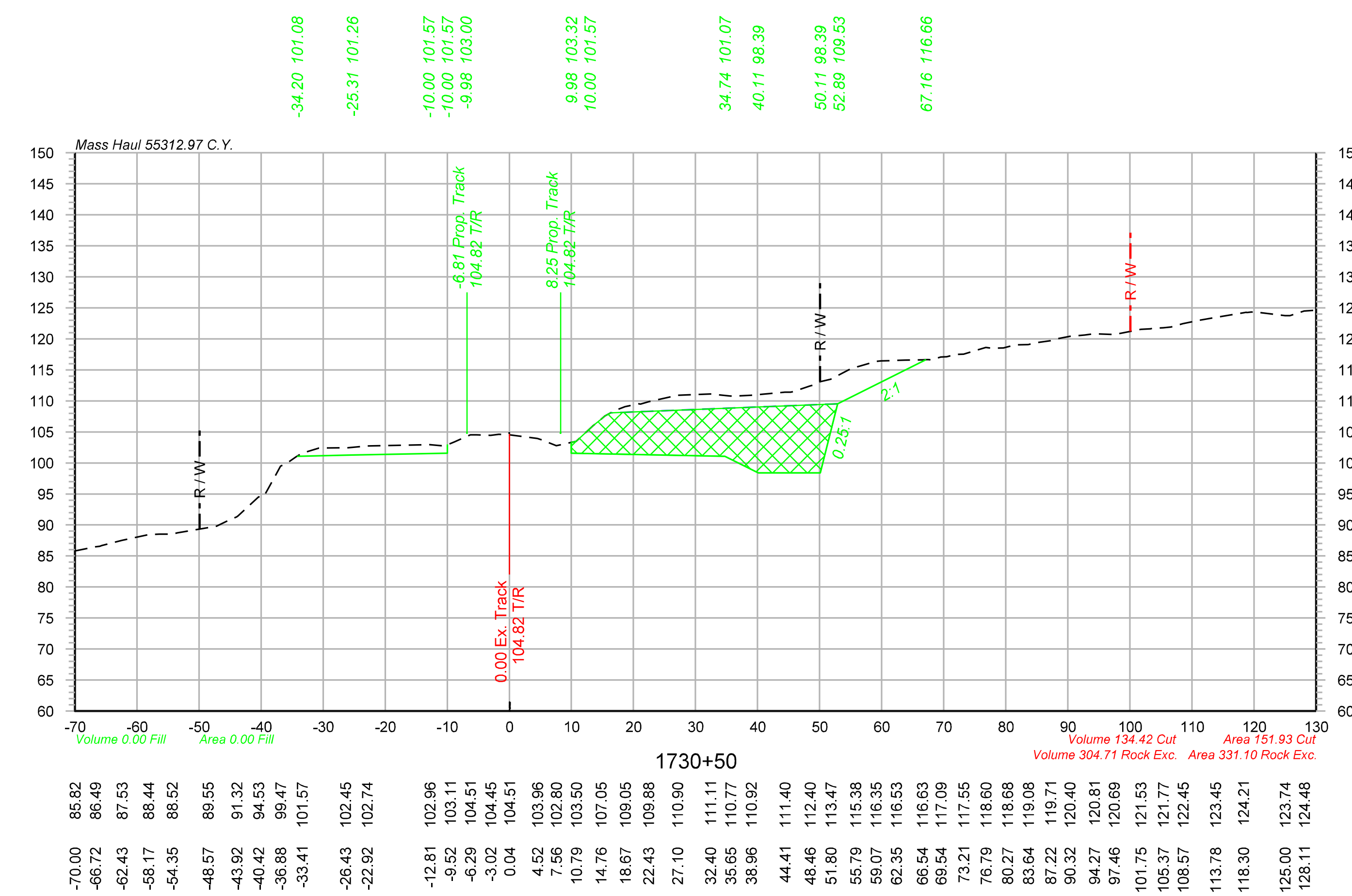
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	**UNION PACIFIC RAILROAD** — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon; Portland Subdivision MP 66.98 to MP 72.35; Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 128 of 139	SHEET TITLE: CROSS SECTIONS STA.1730+00 TO STA.1730+01

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





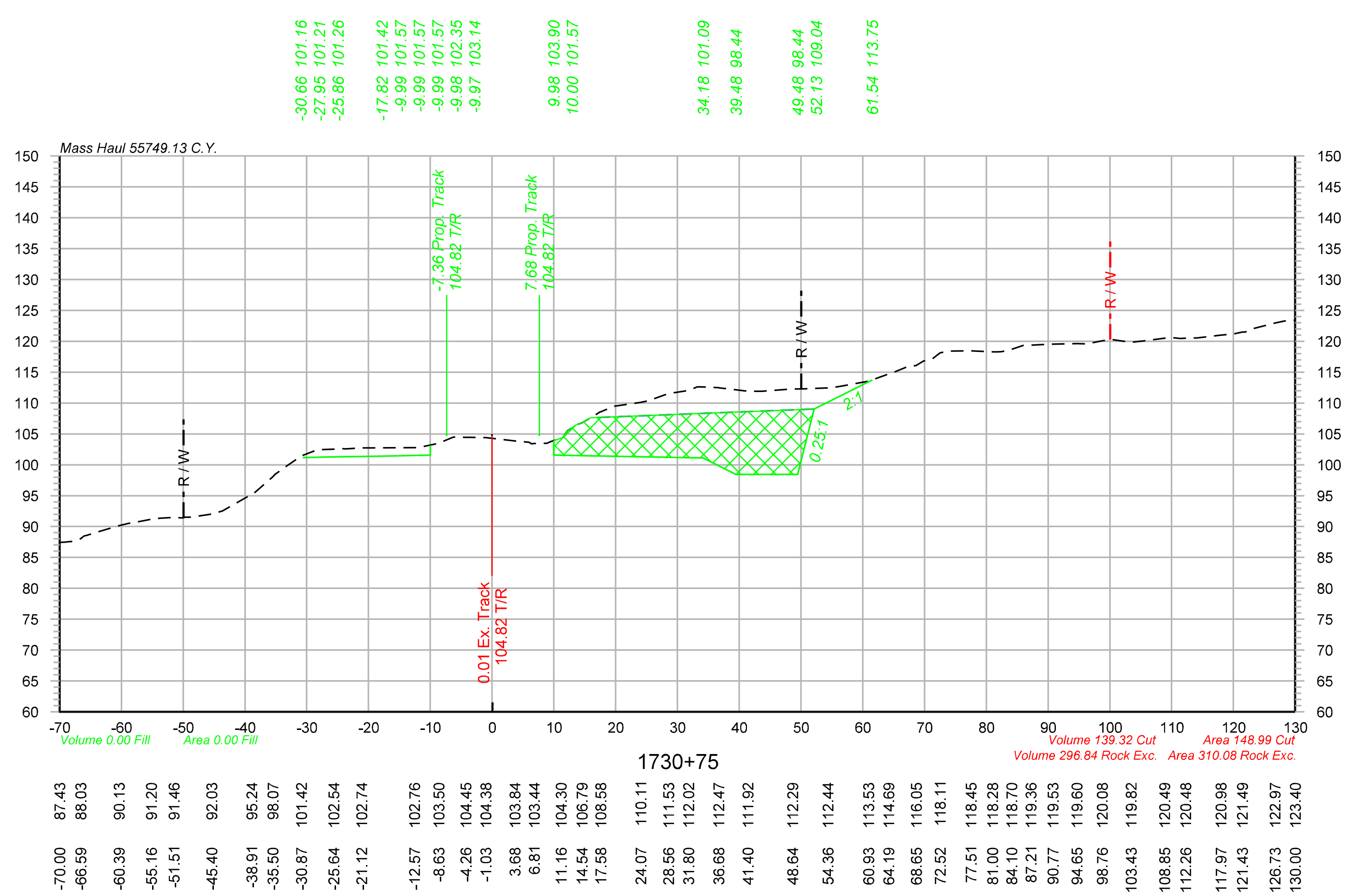
Legend

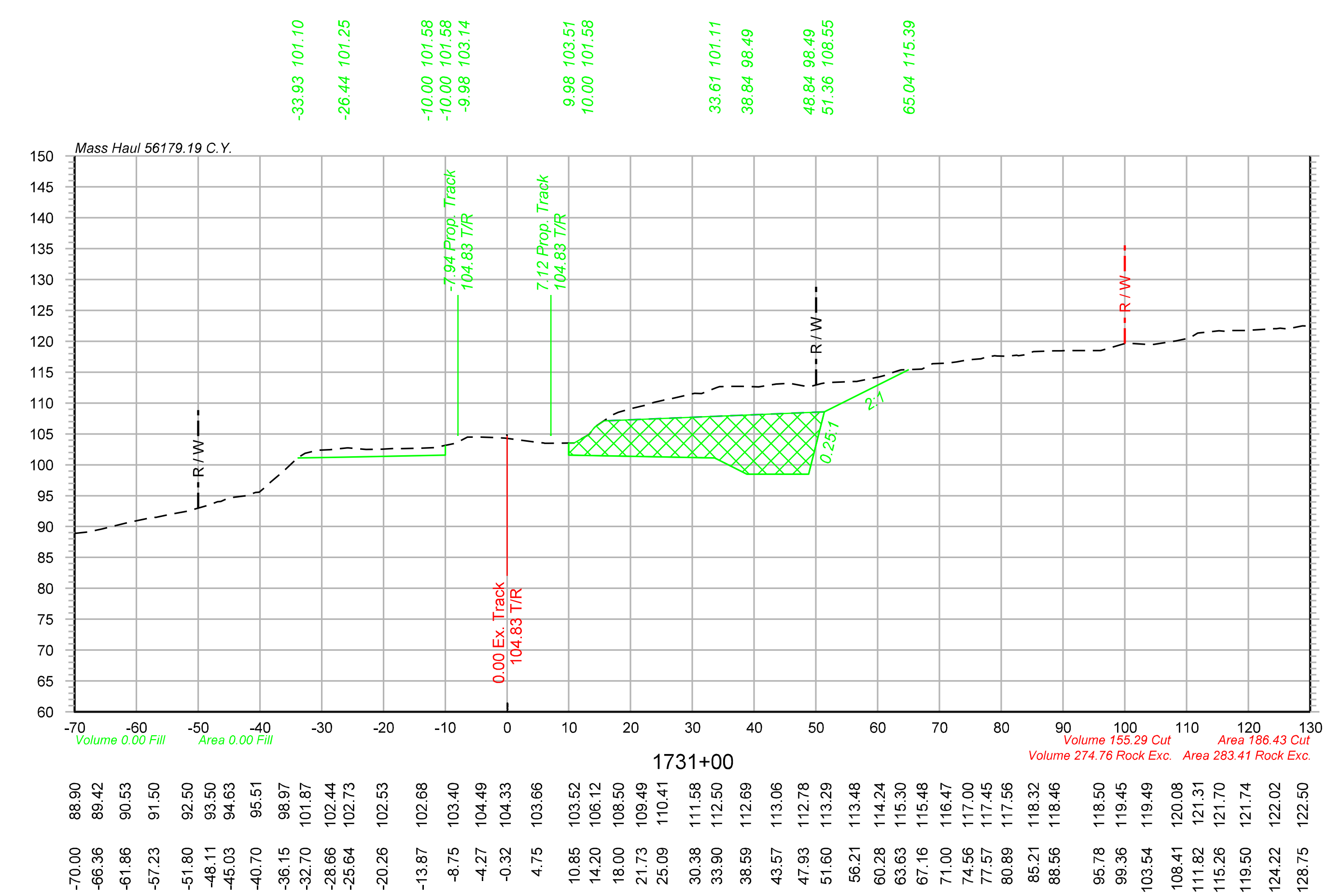
Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 129 of 139	SHEET TITLE: CROSS SECTIONS STA.1730+25 TO STA.1730+50

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



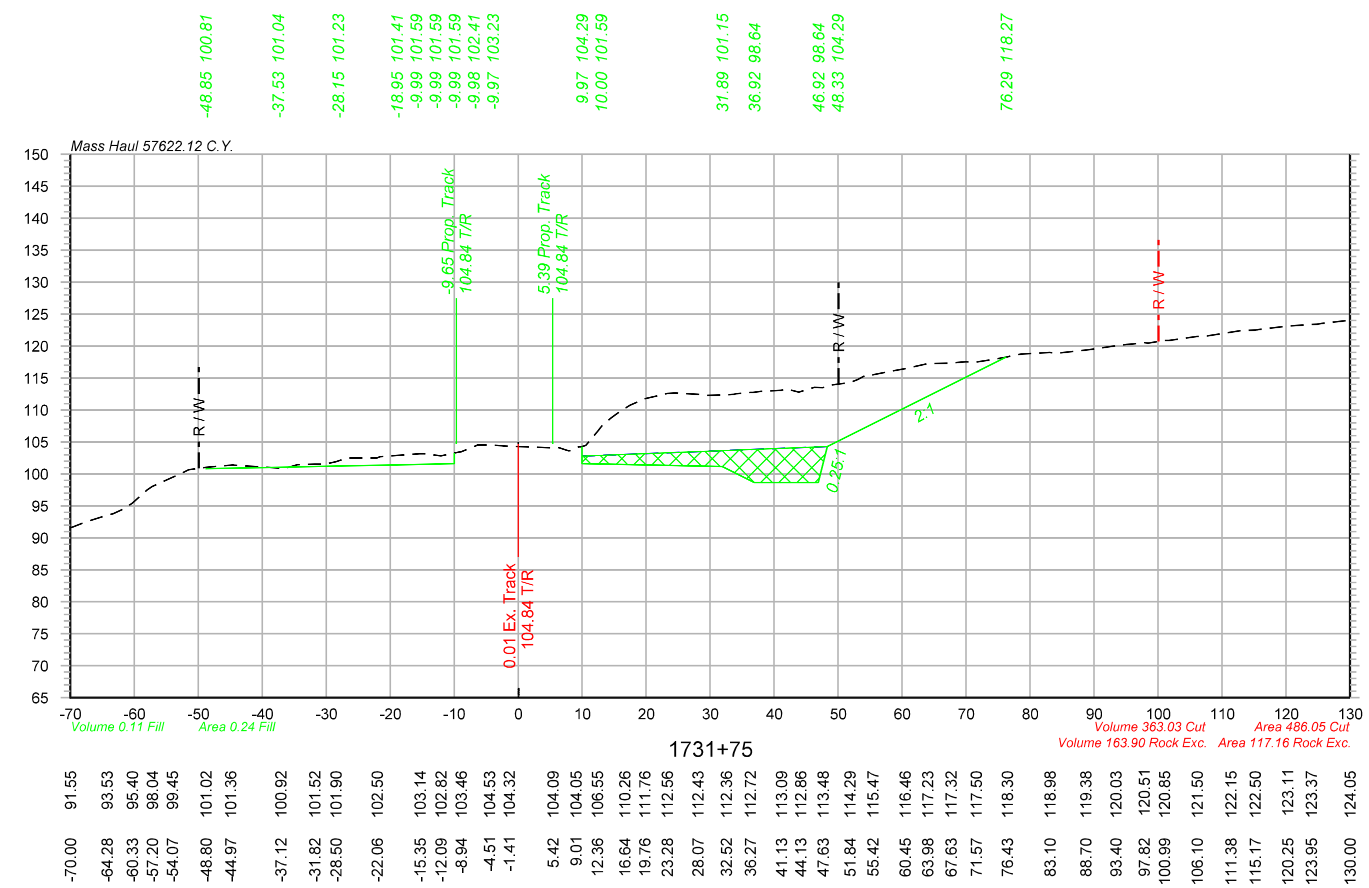


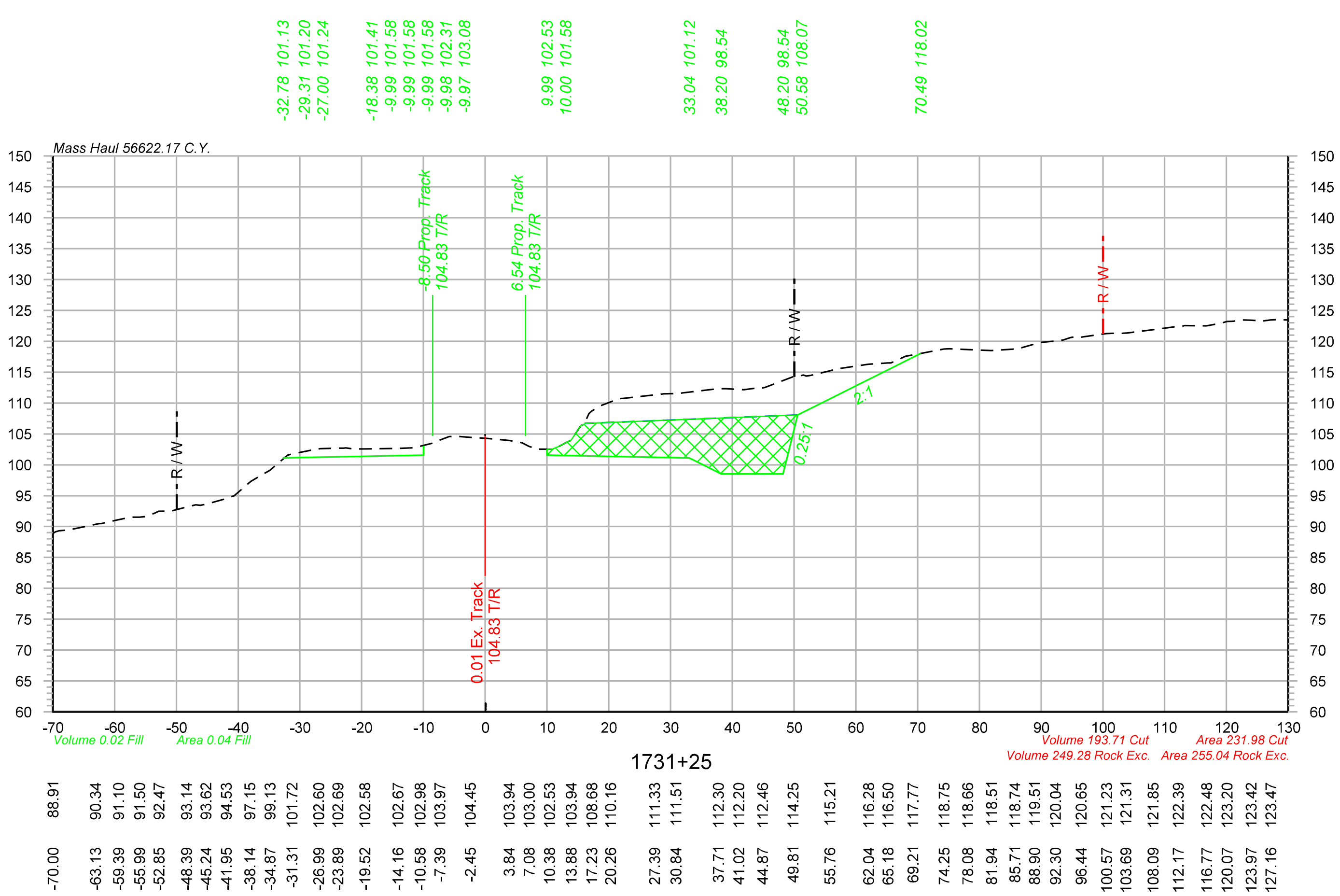
Legend

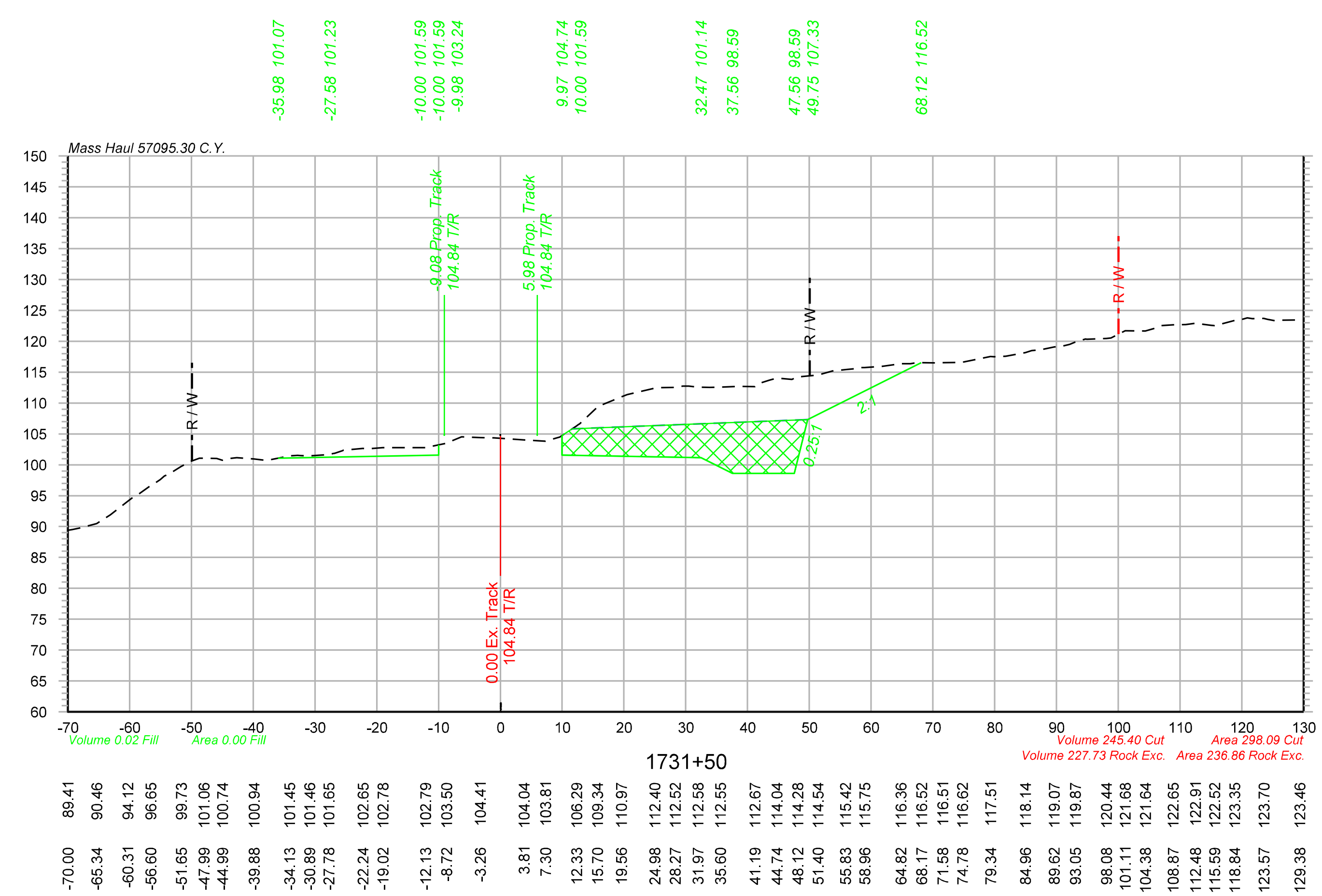
Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 130 of 139	SHEET TITLE: CROSS SECTIONS STA.1730+75 TO STA.1731+00







Legend

Assumed Rock Excavation

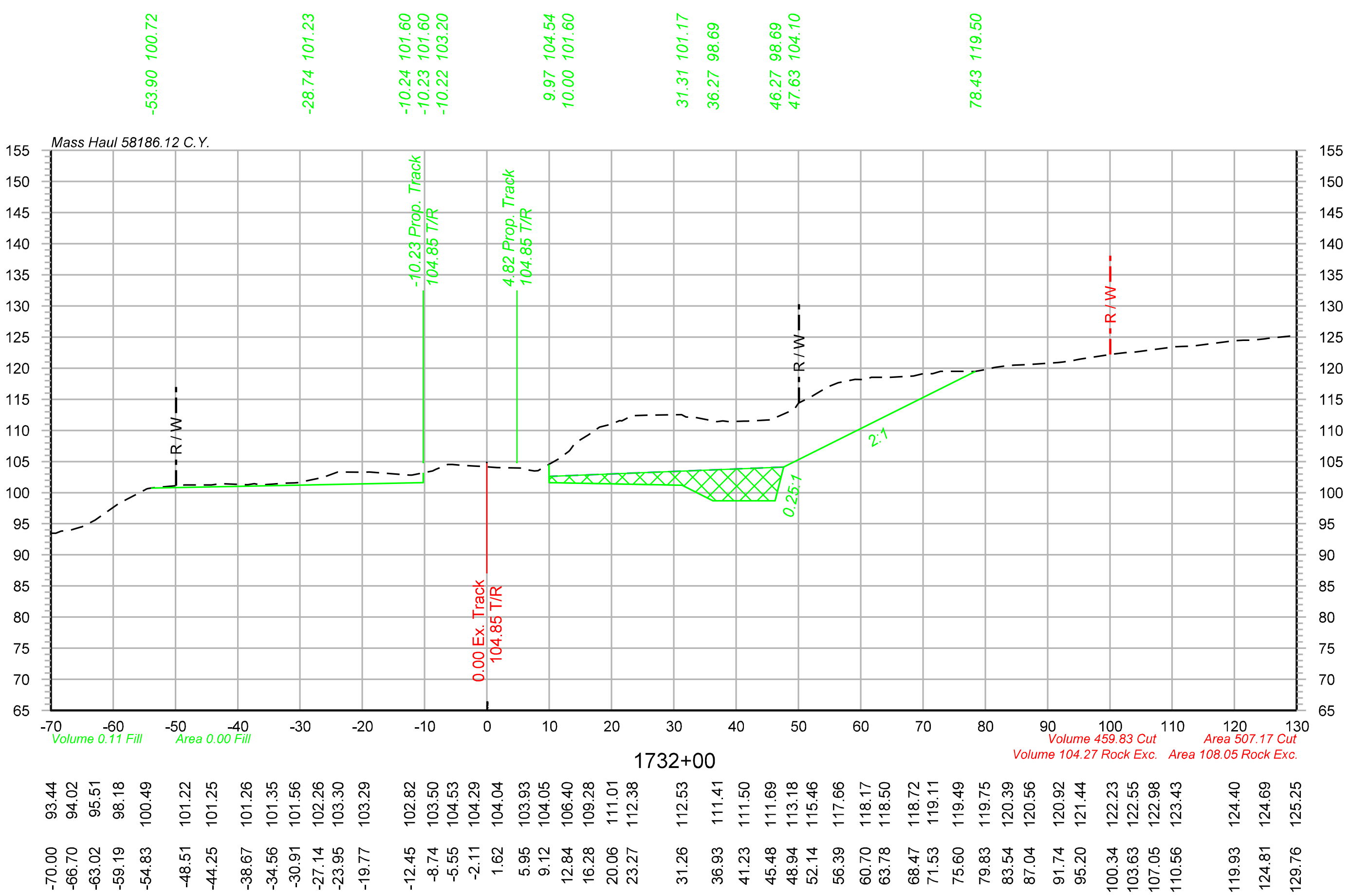
OLSSON ASSOCIATES

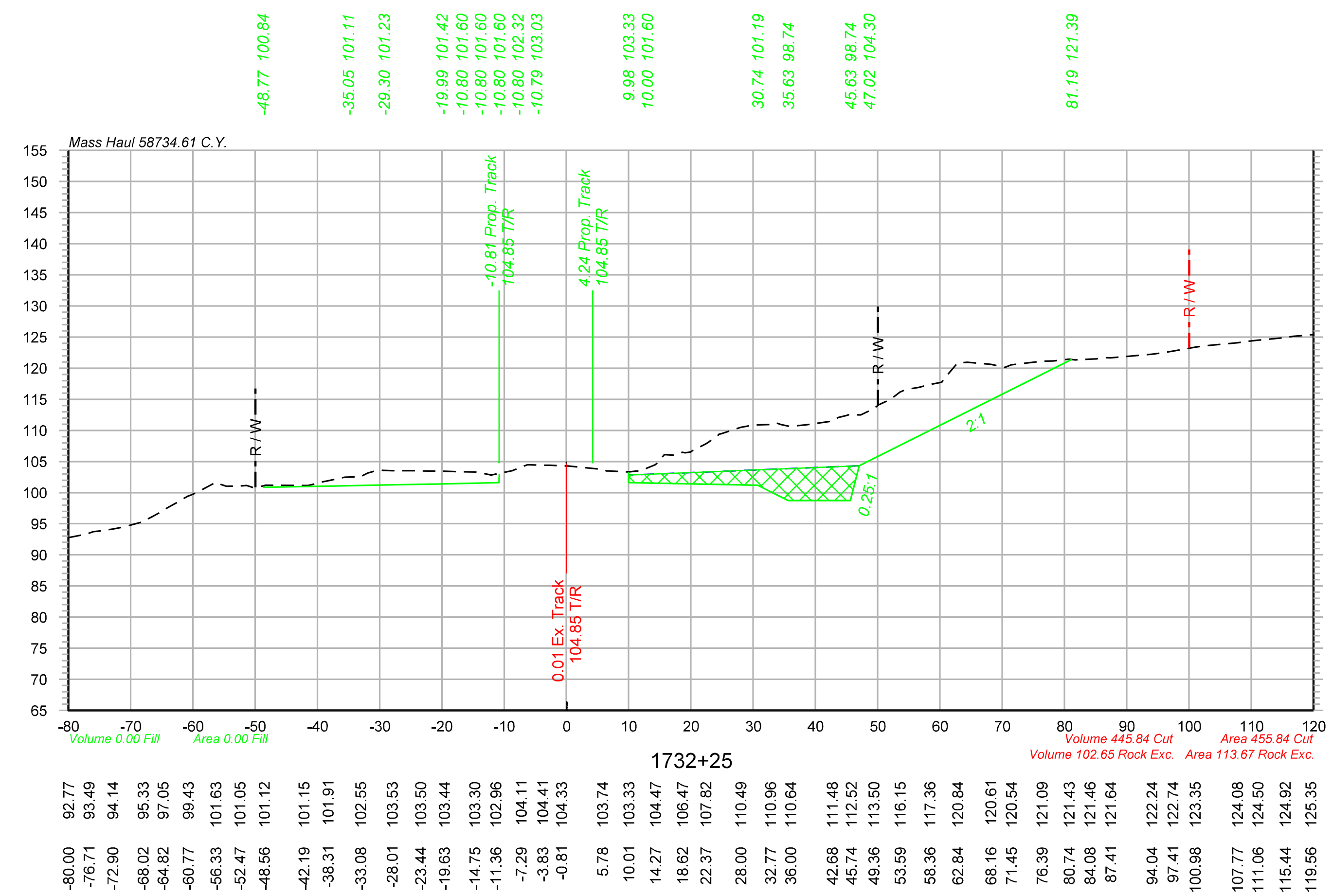
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon; Portland Subdivision MP 66.98 to MP 72.35; Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER: X 131 of 139	SHEET TITLE: CROSS SECTIONS STA.1731+25 TO STA.1731+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014





Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 132 of 139

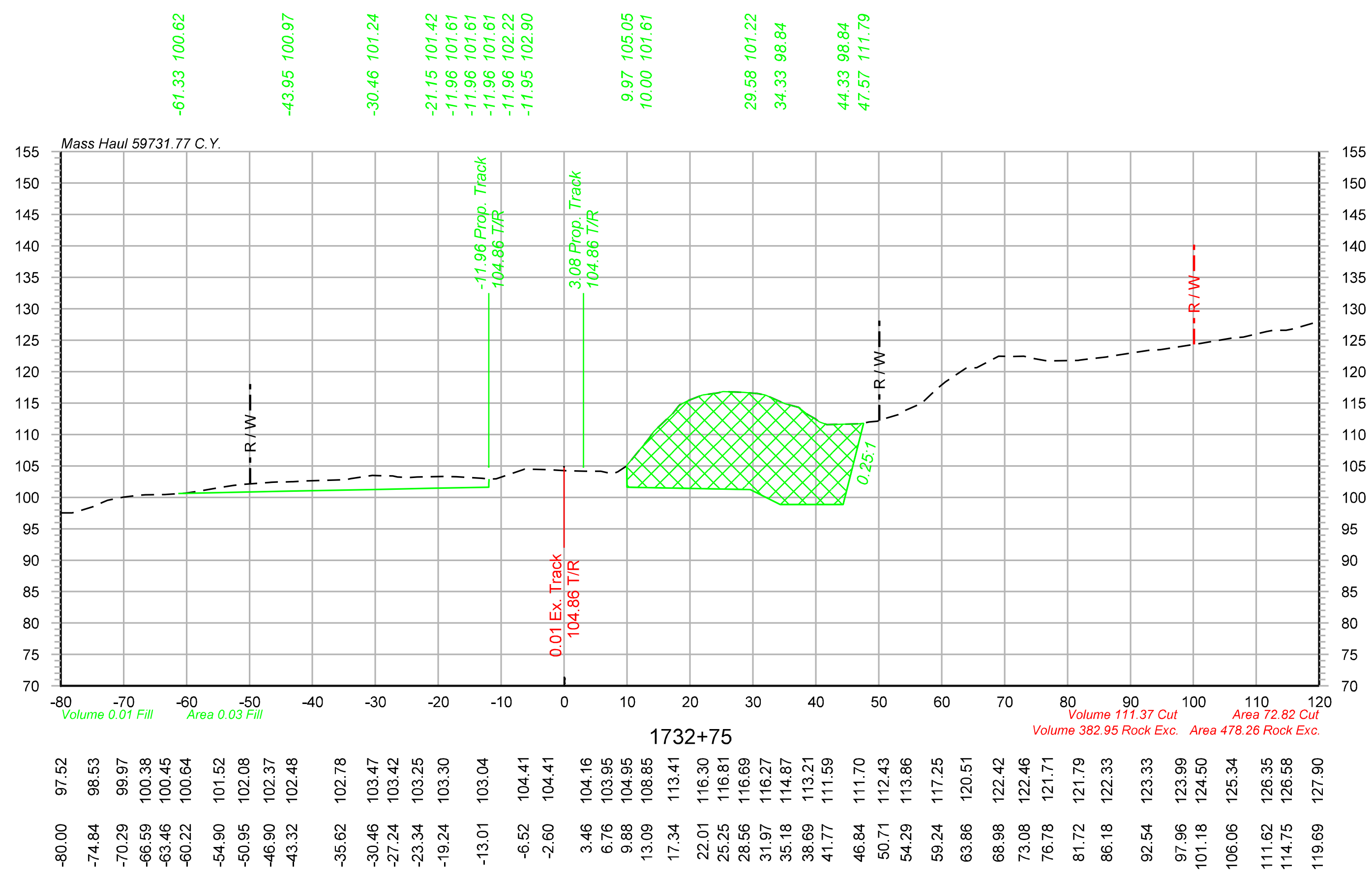
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

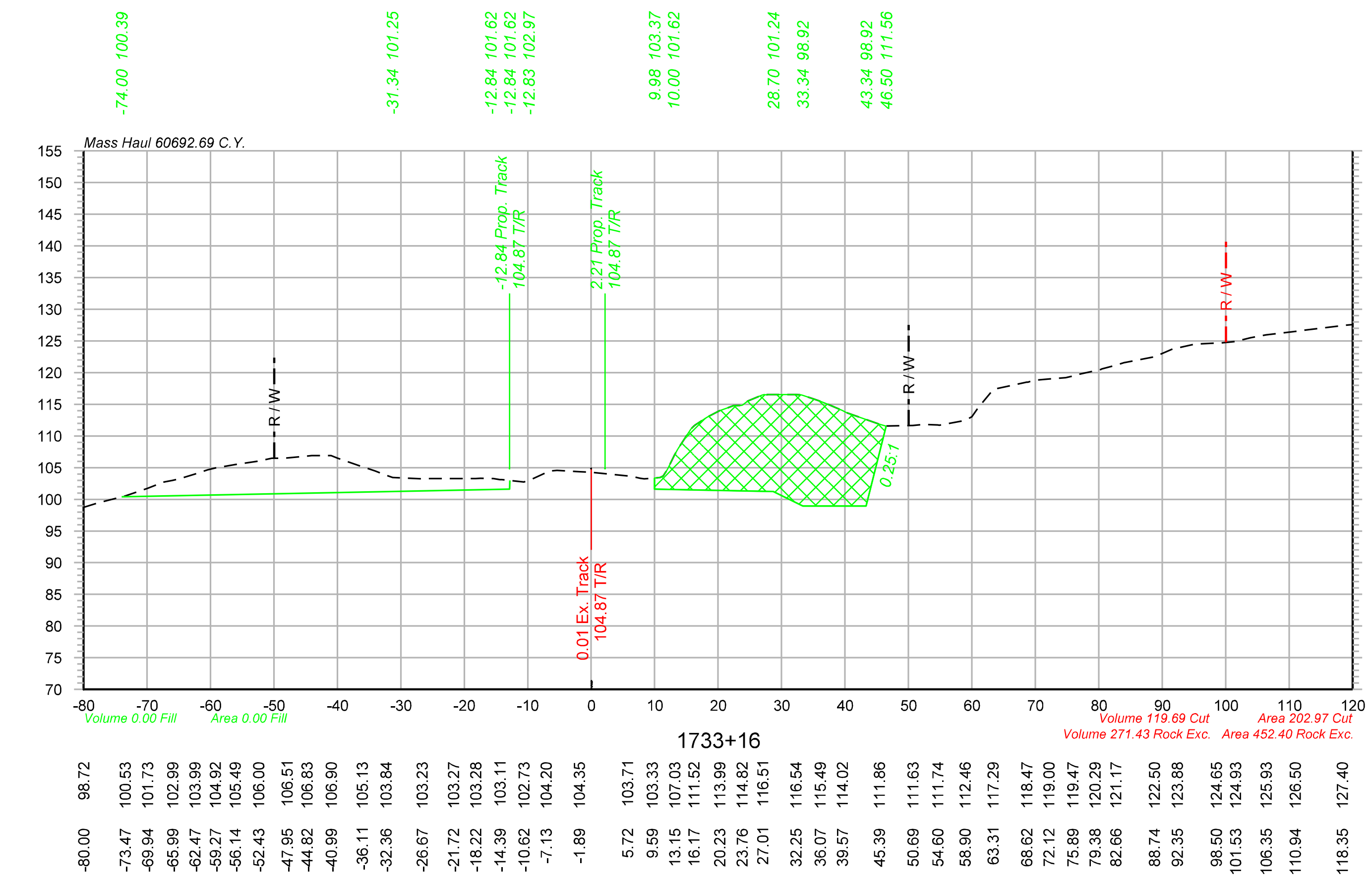
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

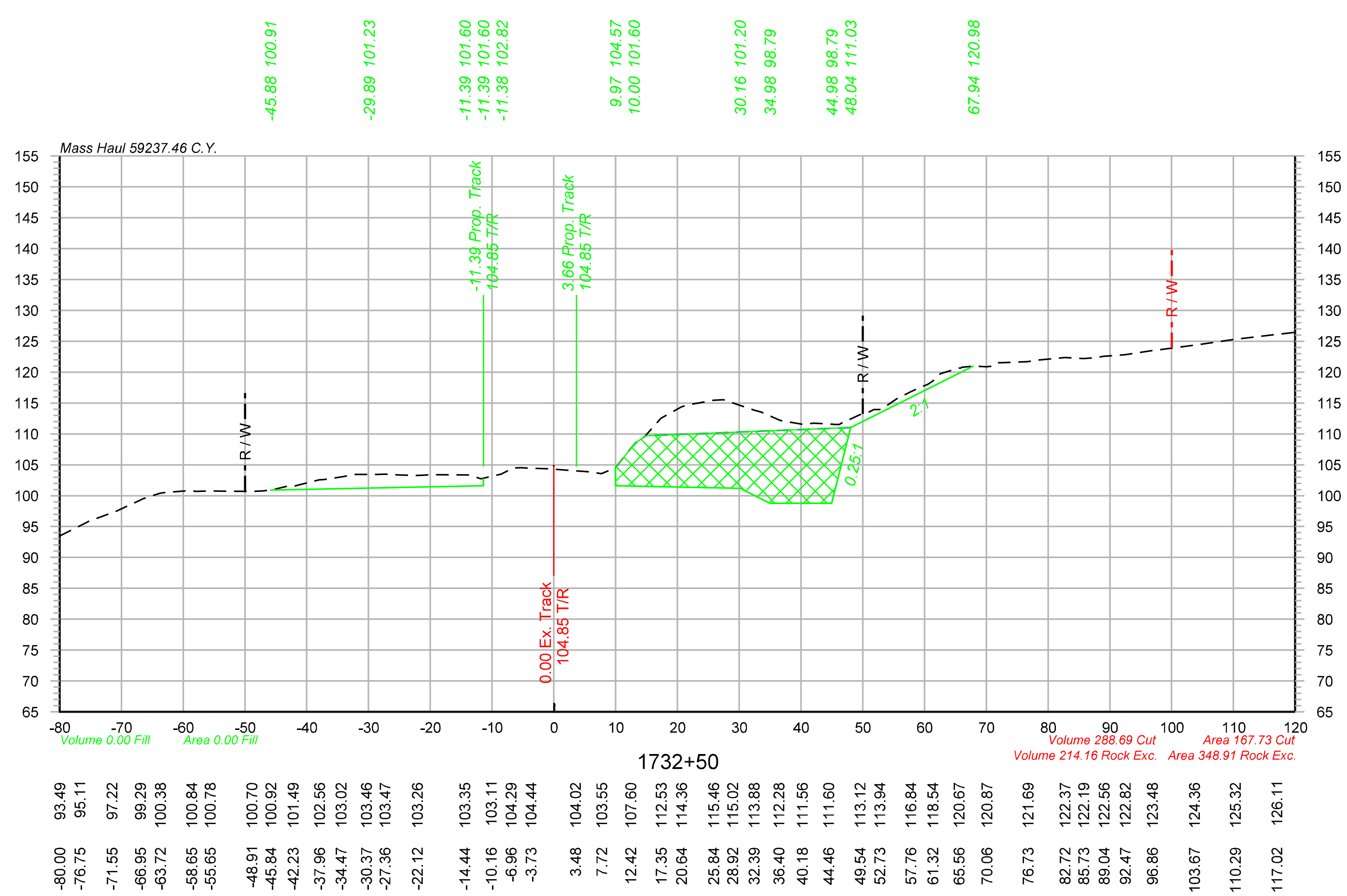
SHEET TITLE:
CROSS SECTIONS STA.1732+00 TO STA.1732+25

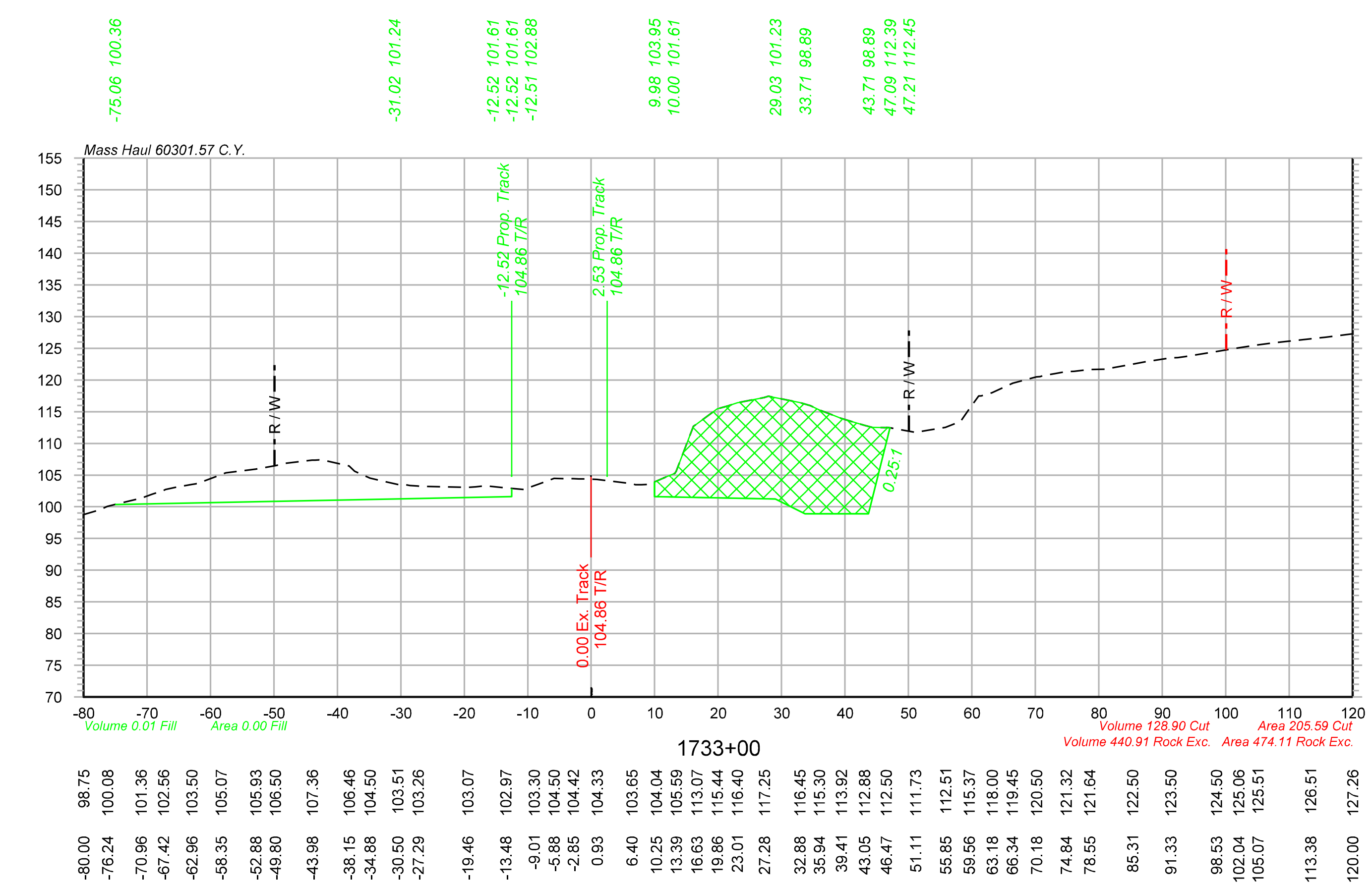
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Legend

Assumed Rock Excavation

OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

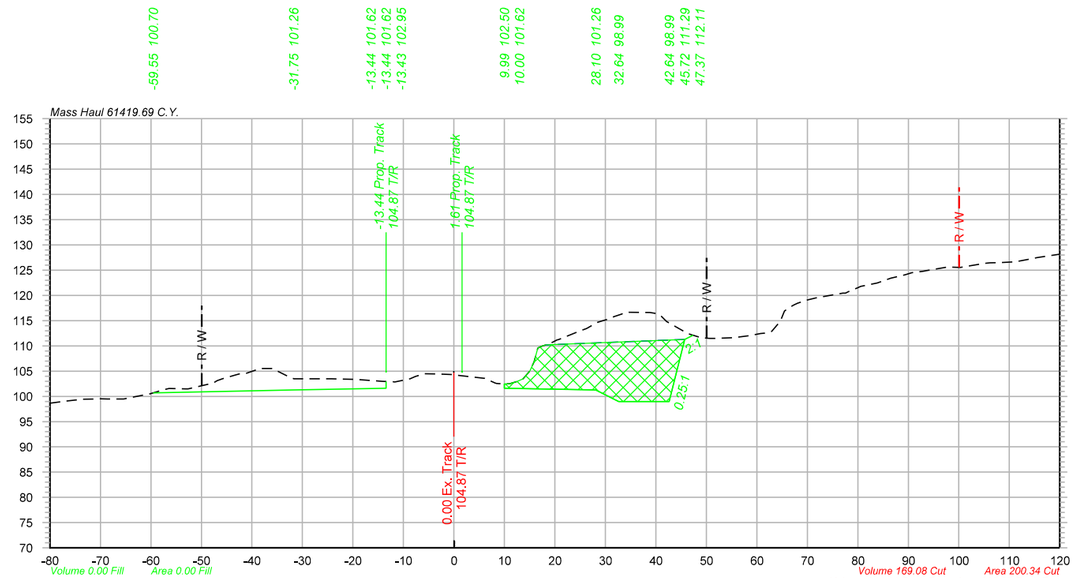
UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER X 133 of 139

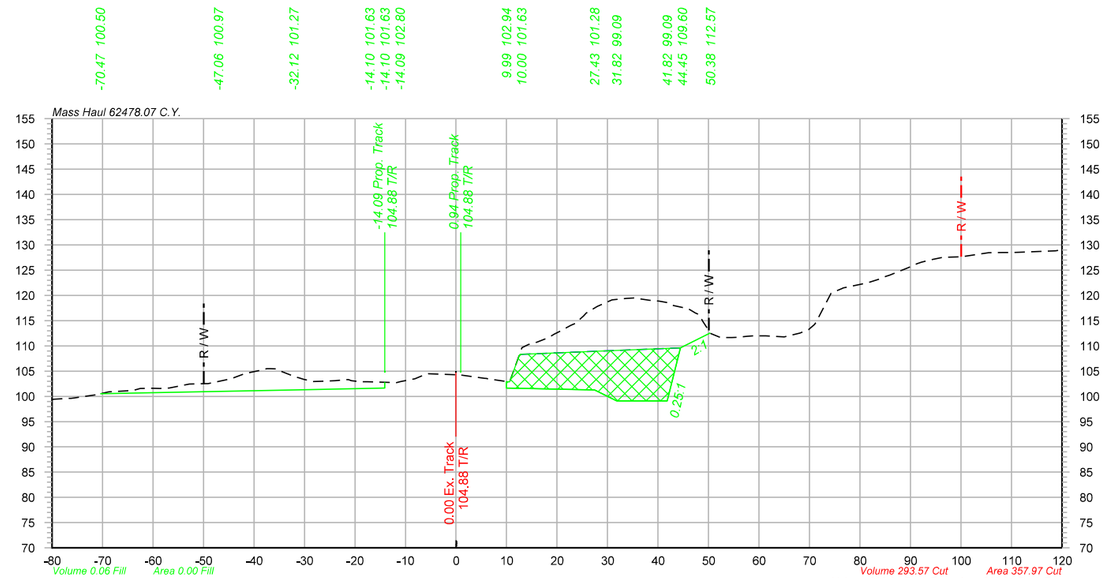
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

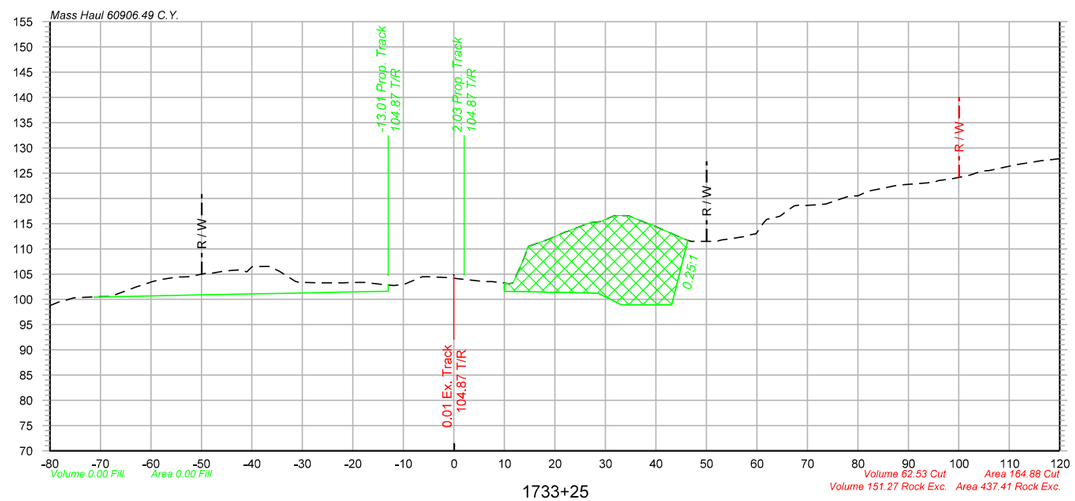
SHEET TITLE:
CROSS SECTIONS STA.1732+50 TO STA.1733+16



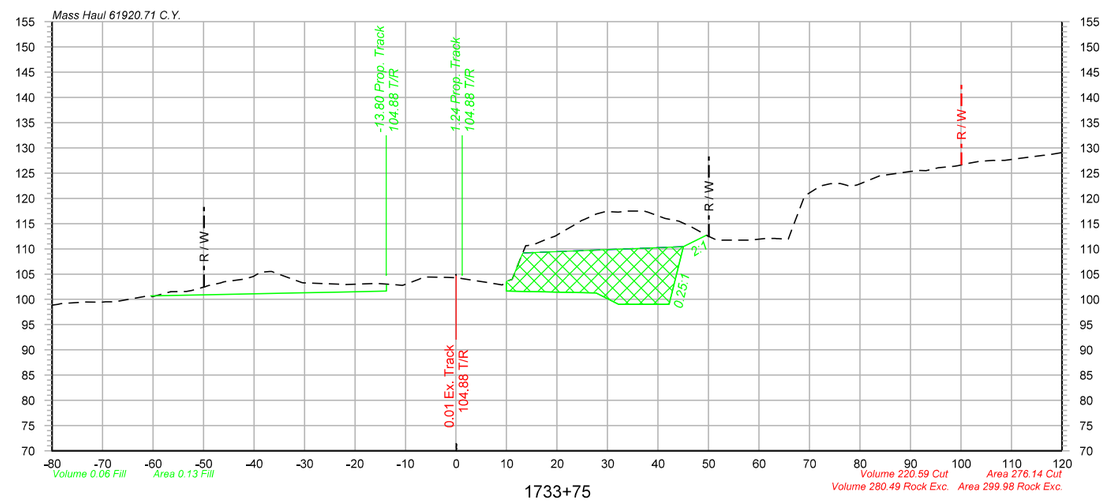
1733+50



1734+00



1733+25



1733+75

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2916
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 134 of 139

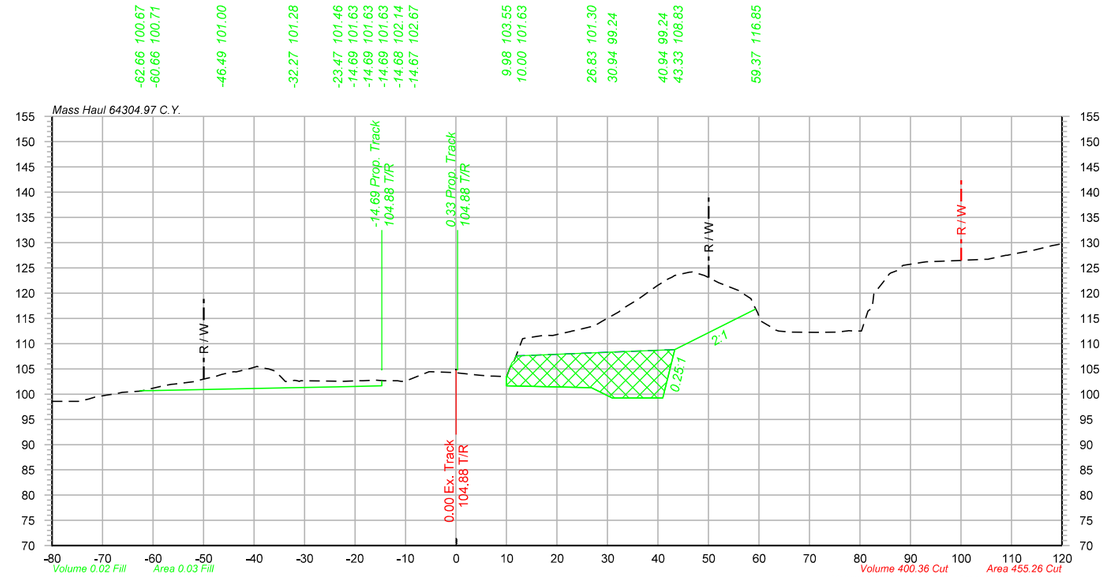
UNION PACIFIC RAILROAD

Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

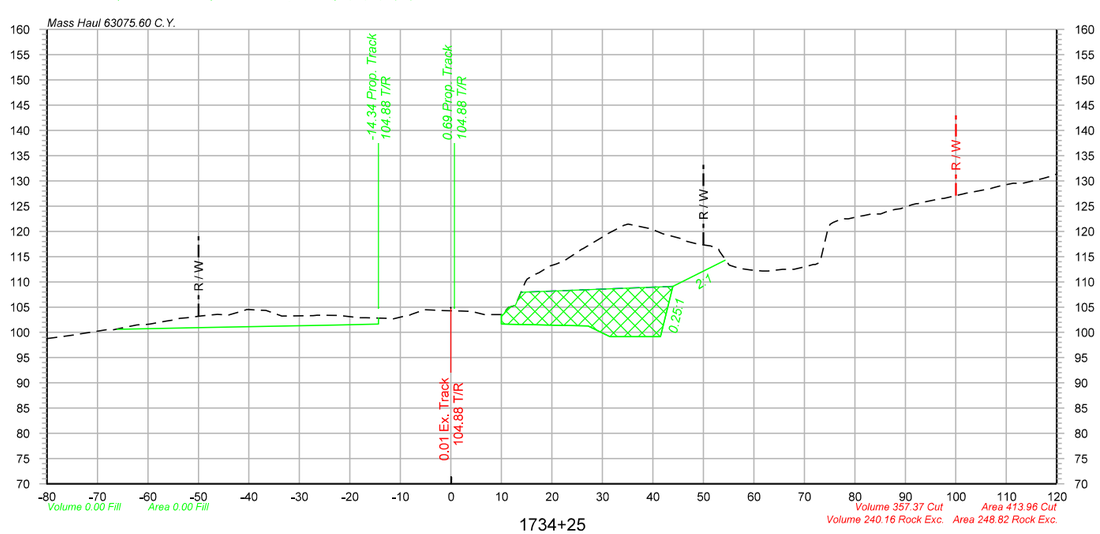
SHEET TITLE:
CROSS SECTIONS STA.1733+25 TO STA.1734+00

Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omhe05573\ipgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\OII-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014



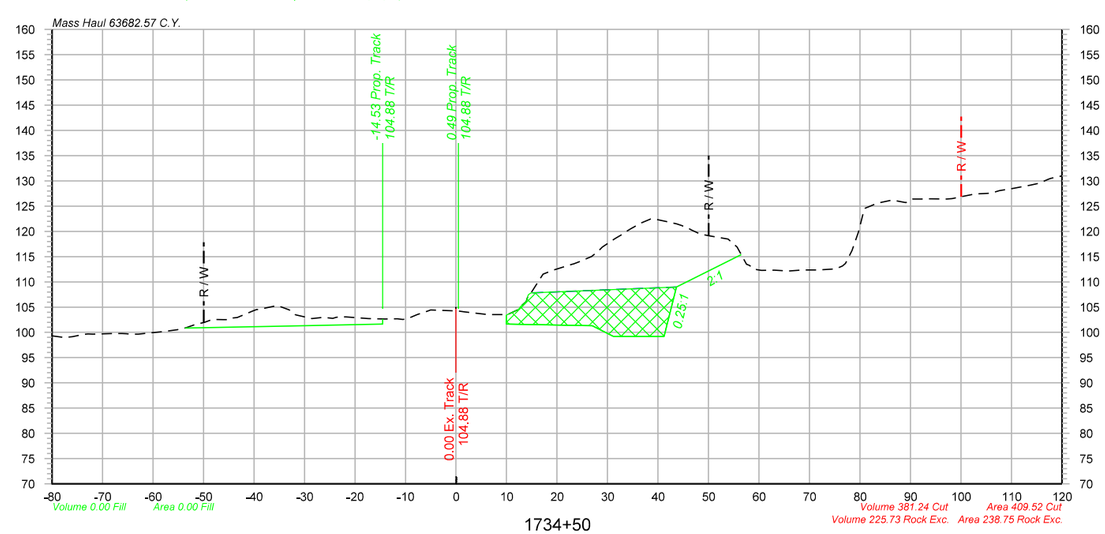
1734+75

-80.00	98.57
-76.90	98.56
-72.76	99.04
-69.13	99.83
-66.08	100.34
-62.38	100.61
-58.50	101.52
-51.78	102.47
-47.65	103.50
-44.05	104.45
-40.66	105.10
-37.06	104.98
-33.80	102.49
-30.75	102.65
-26.95	102.63
-23.95	102.55
-20.50	102.61
-15.93	102.78
-11.84	102.65
-8.56	103.15
-5.33	104.43
-0.42	104.27
4.75	103.75
9.56	103.50
13.20	110.99
16.65	111.53
22.69	112.42
27.45	113.53
32.24	116.28
35.55	118.45
39.89	121.48
43.27	123.48
46.27	124.14
50.29	122.96
55.84	120.57
58.85	117.90
62.32	113.33
66.50	112.28
71.28	112.25
75.47	112.28
80.29	112.48
85.21	122.96
88.51	125.50
92.51	126.13
100.45	126.50
104.81	126.68
108.88	127.49
114.56	128.53
118.24	129.45



1734+25

-80.00	98.79
-76.81	99.17
-71.34	100.04
-68.24	100.51
-62.15	101.49
-56.39	102.22
-52.24	102.90
-48.03	103.39
-44.84	103.50
-41.27	104.24
-38.02	104.40
-33.80	103.34
-27.26	103.33
-22.32	103.36
-18.05	102.90
-12.32	102.77
-8.81	103.31
-5.46	104.39
-1.56	104.31
2.02	104.23
5.30	103.85
9.70	103.52
12.79	105.34
16.42	111.36
19.64	113.17
22.79	114.41
25.93	116.47
30.84	119.37
34.25	121.21
38.91	120.64
41.96	119.53
45.60	118.55
48.87	117.49
52.62	116.63
56.93	112.74
61.68	112.14
65.71	112.46
70.59	113.12
74.63	120.37
77.66	122.51
80.91	122.99
85.10	123.46
89.08	124.47
92.19	125.48
97.01	126.47
101.76	127.49
106.94	128.50
109.95	129.25
113.11	129.48
116.50	130.29
120.00	131.36



1734+50

-80.00	99.29
-75.95	99.16
-72.89	99.67
-67.95	99.76
-64.45	99.63
-61.05	99.85
-58.04	100.13
-53.69	100.84
-49.84	102.00
-46.10	102.50
-40.14	104.29
-35.41	105.31
-31.85	103.50
-28.54	102.74
-24.39	102.78
-17.36	102.73
-14.11	102.64
-10.59	102.57
-5.69	104.20
0.47	104.22
6.30	103.51
10.03	103.44
13.89	106.12
17.22	111.50
22.98	113.49
26.84	115.04
31.49	118.56
34.68	120.57
38.52	122.46
41.88	121.88
46.23	120.51
50.22	119.10
53.82	118.50
56.89	114.69
60.50	112.27
65.89	112.16
71.81	112.36
75.08	112.58
78.42	116.18
81.72	124.88
85.98	126.12
89.08	125.68
92.13	126.39
97.19	126.41
102.75	127.42
105.98	127.57
110.23	128.50
113.76	129.16
117.32	130.34

Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 135 of 139

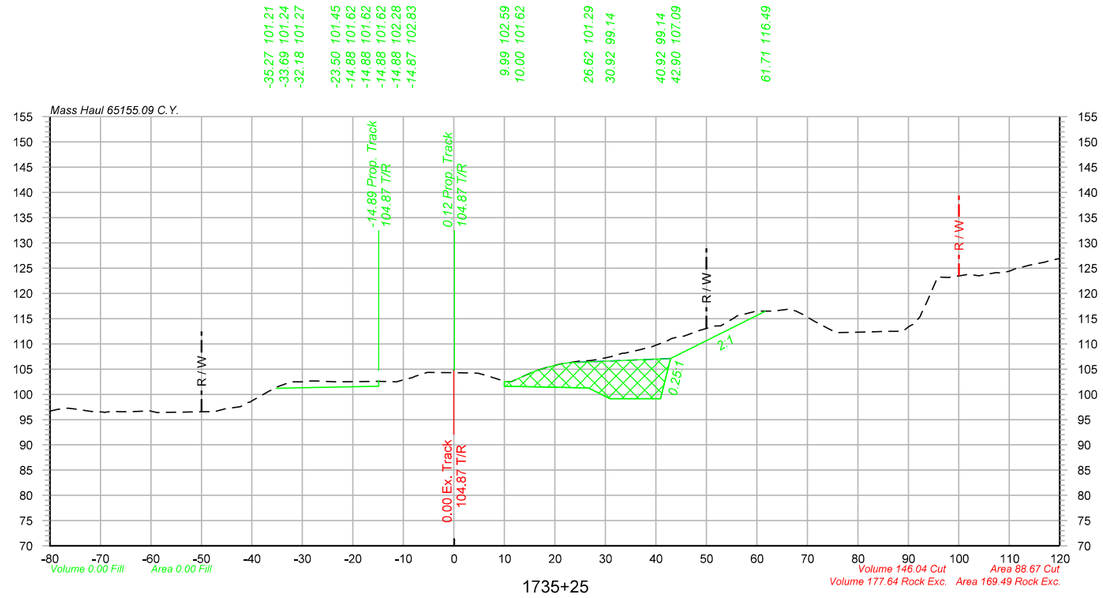
UNION PACIFIC RAILROAD

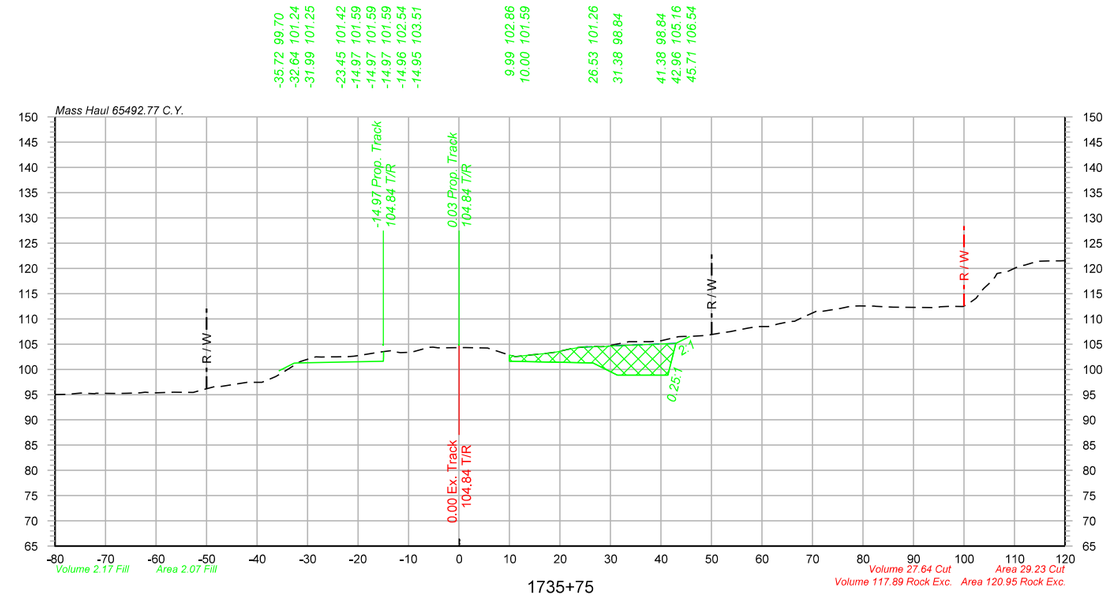
Office of Assistant Vice President
Engineering Design/Construction

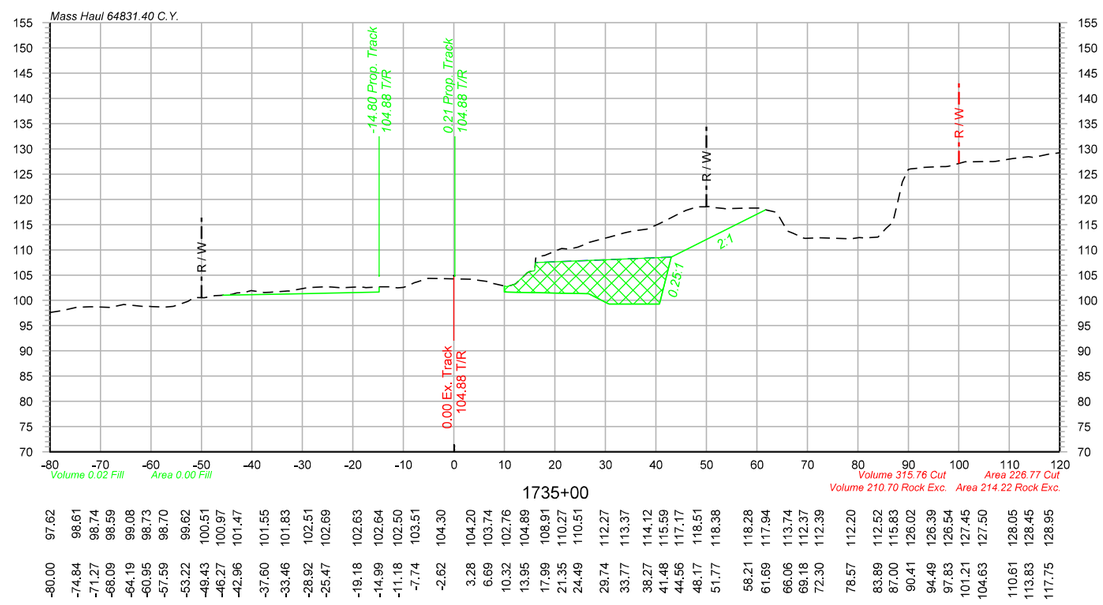
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

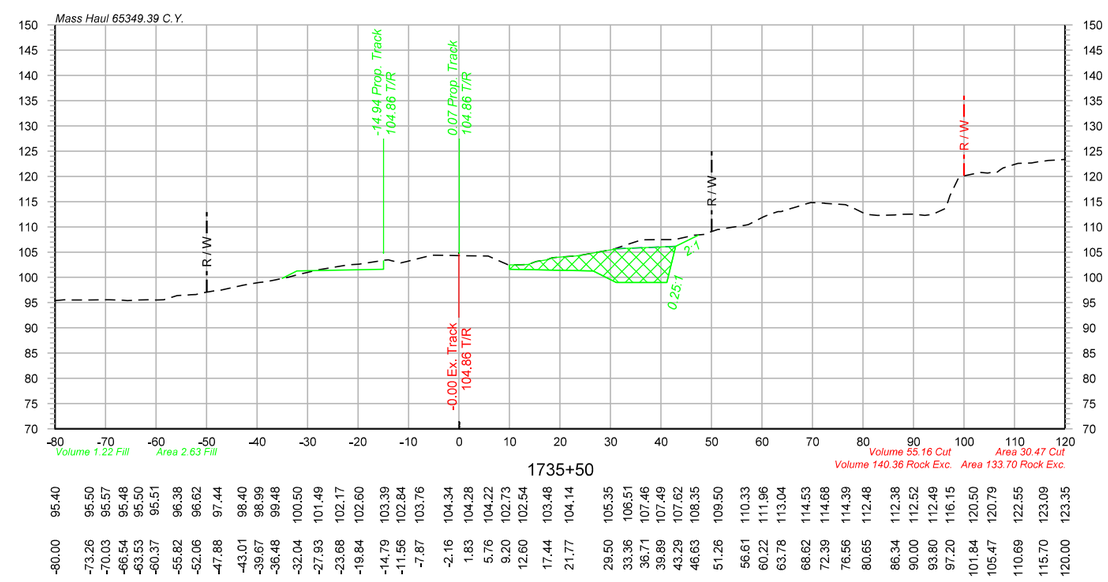
SHEET TITLE:
CROSS SECTIONS STA.1734+25 TO STA.1734+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omha5573\tparn\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Legend

Assumed Rock Excavation

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY:	BWG
CHECKED BY:	RCK
DATE:	10/20/2014
SHEET NUMBER	X 136 of 139

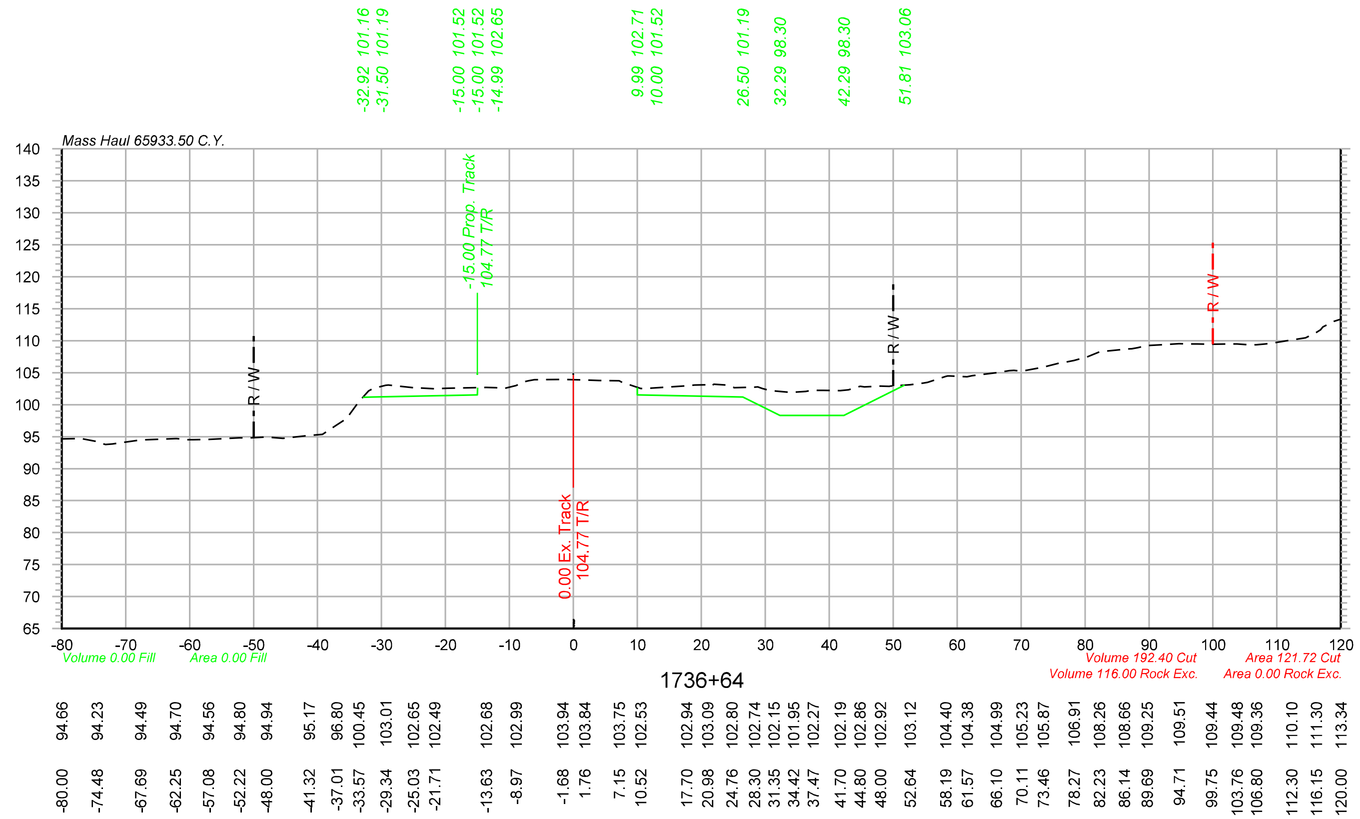
UNION PACIFIC RAILROAD

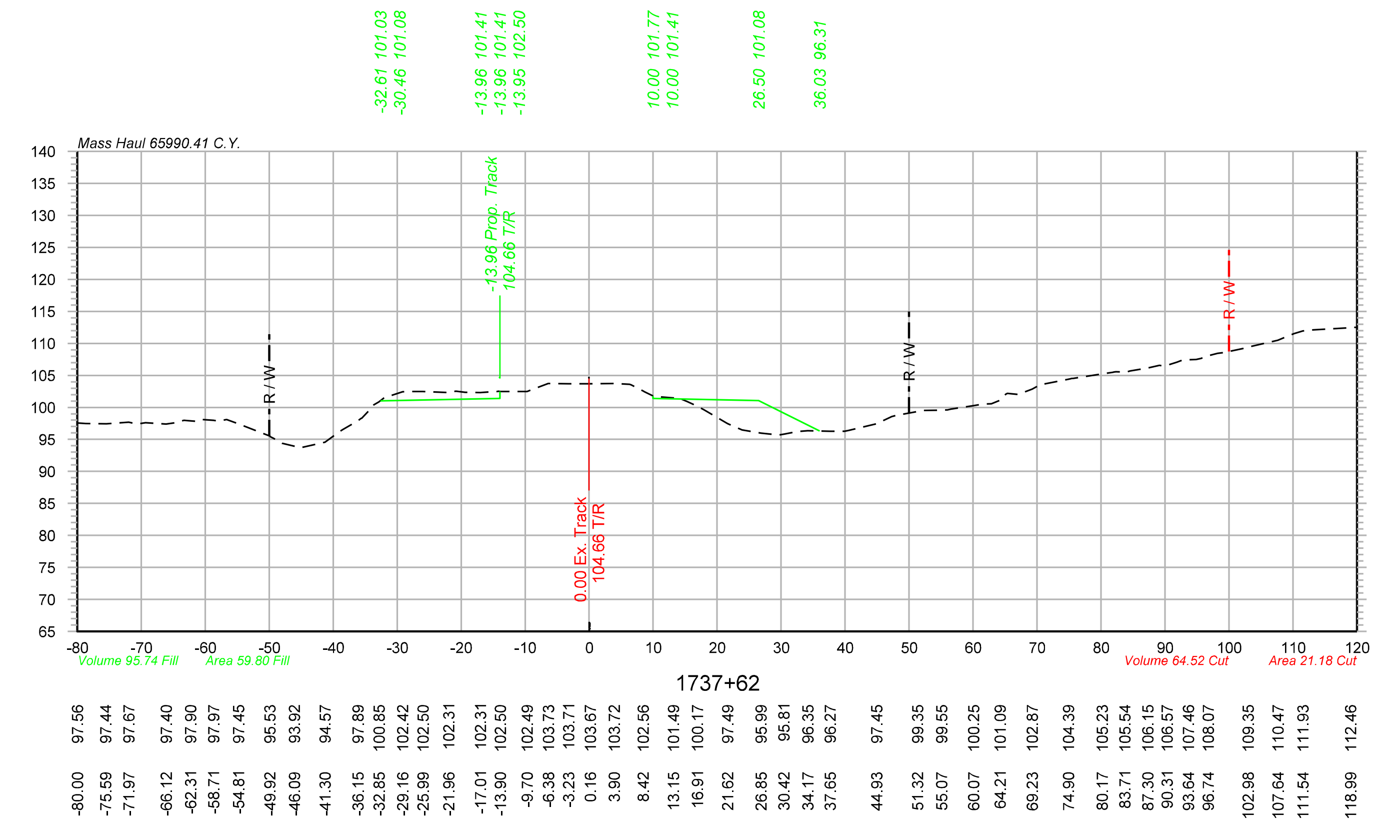
Office of Assistant Vice President
Engineering Design/Construction

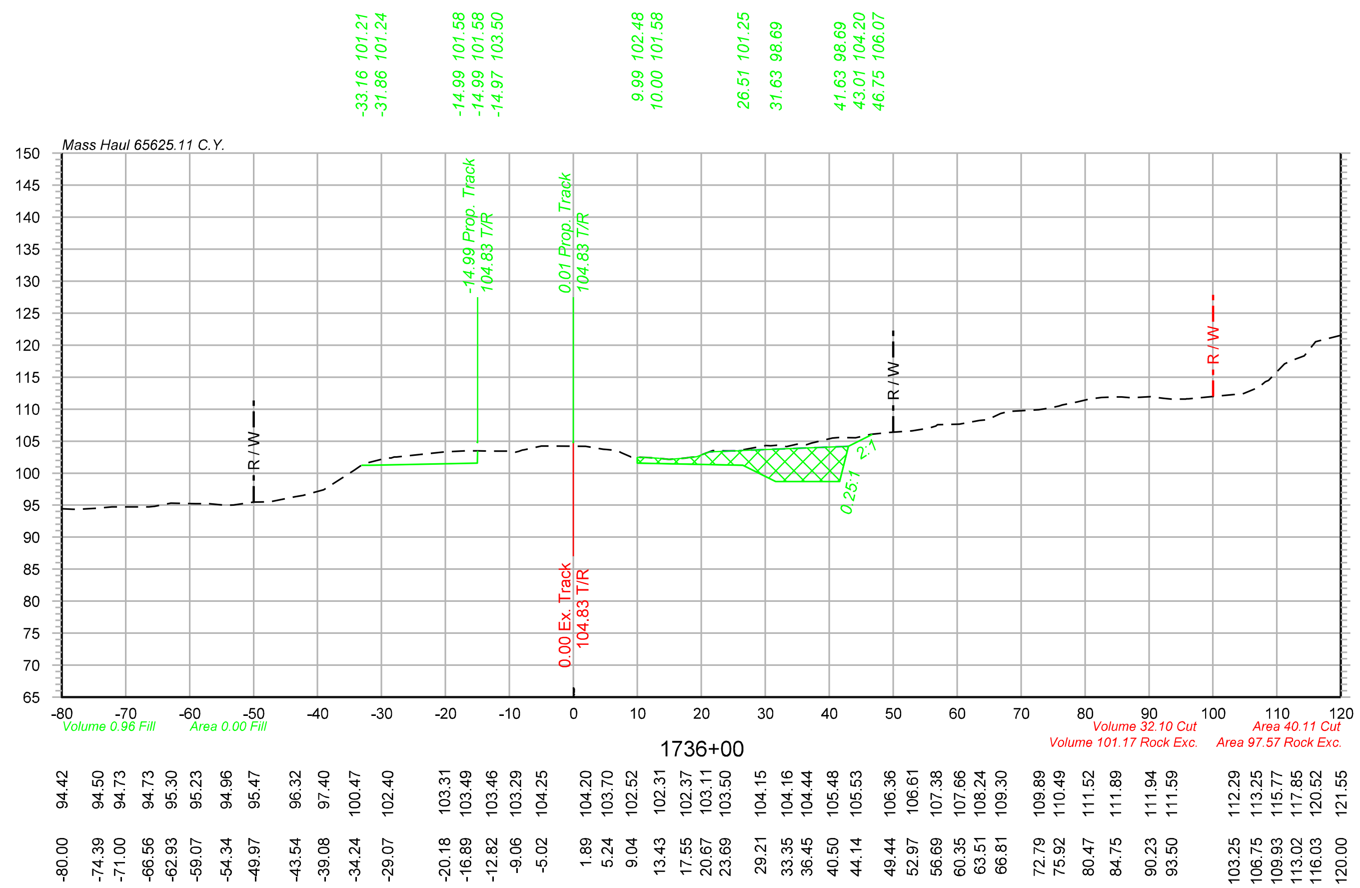
LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

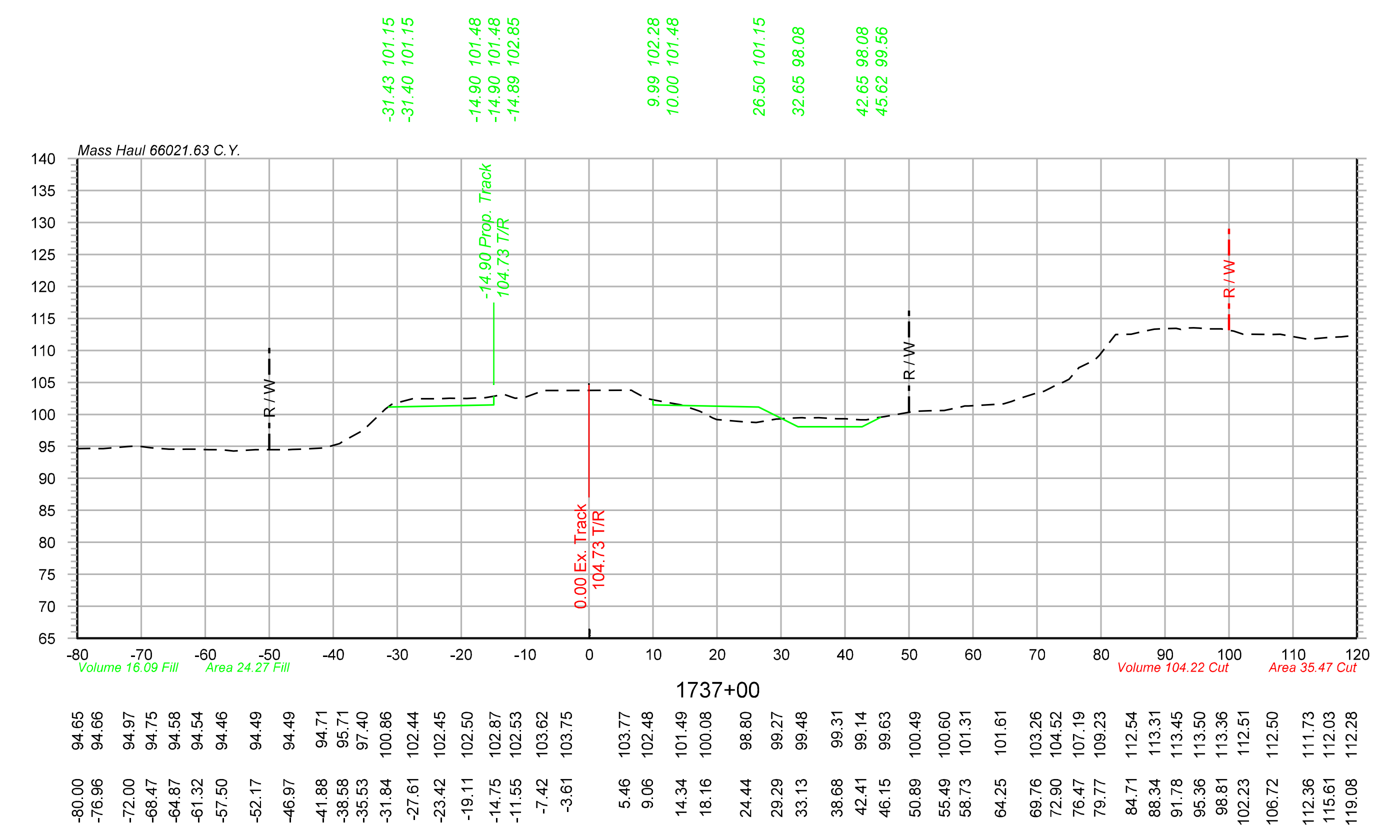
SHEET TITLE:
CROSS SECTIONS STA.1735+00 TO STA.1735+75

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhe5573\pgrm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









Legend

Assumed Rock Excavation

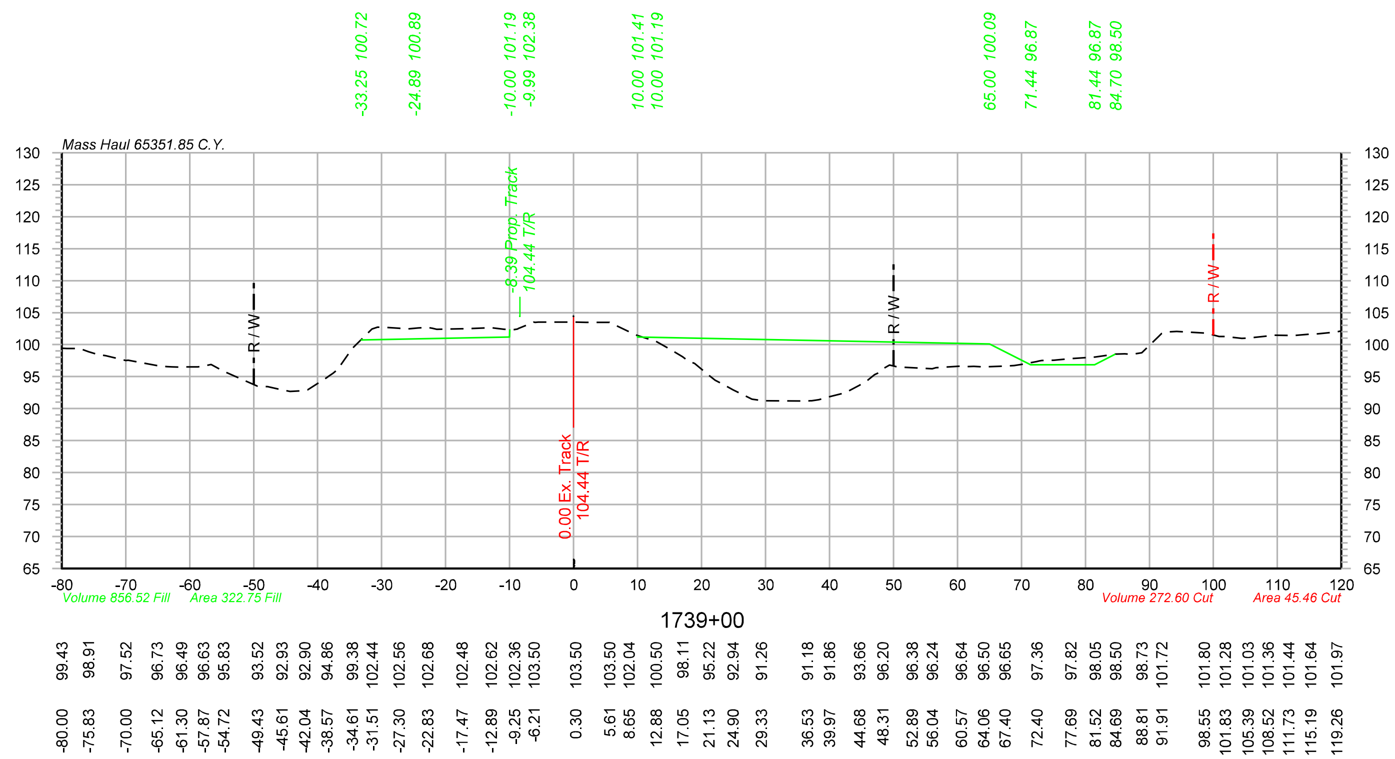
OLSSON ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

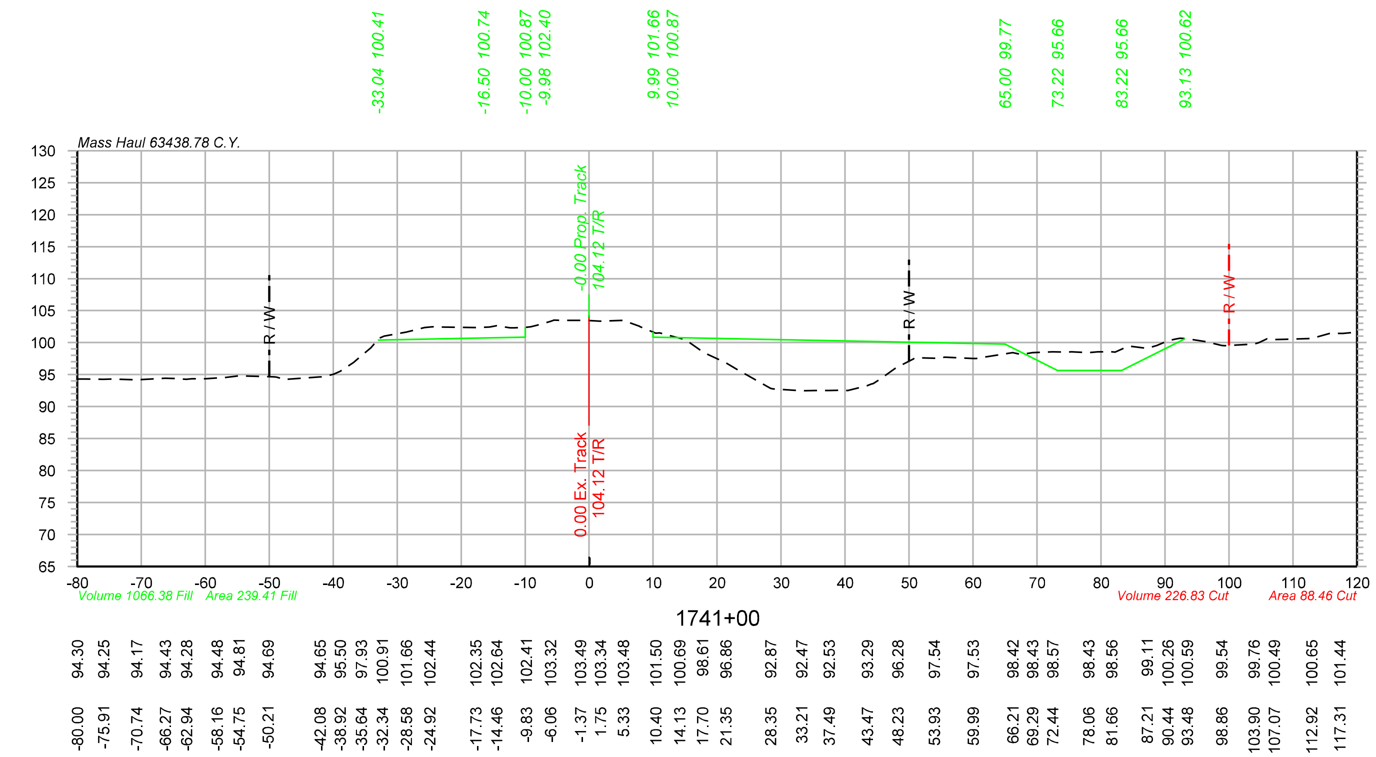
UNION PACIFIC

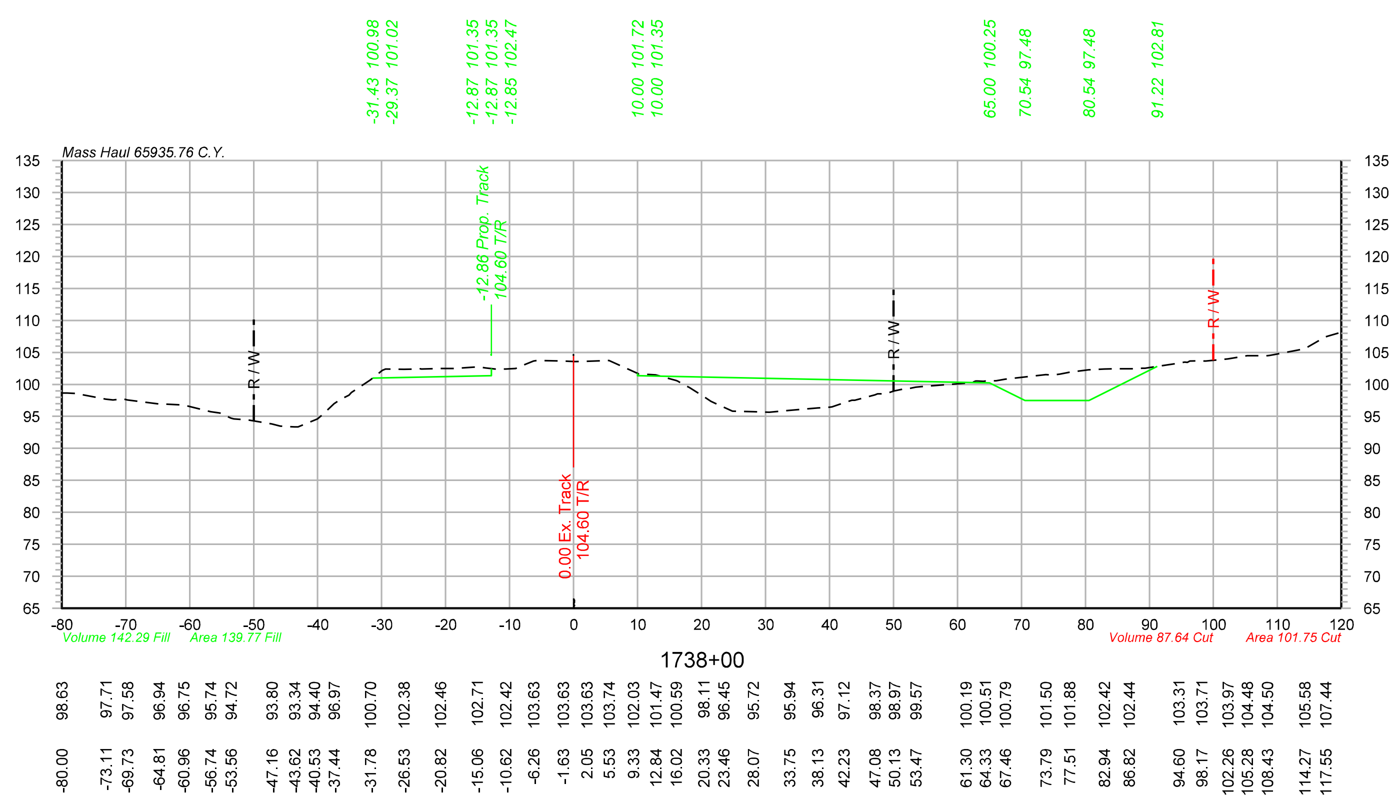
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 137 of 139	SHEET TITLE: CROSS SECTIONS STA.1736+00 TO STA.1737+62

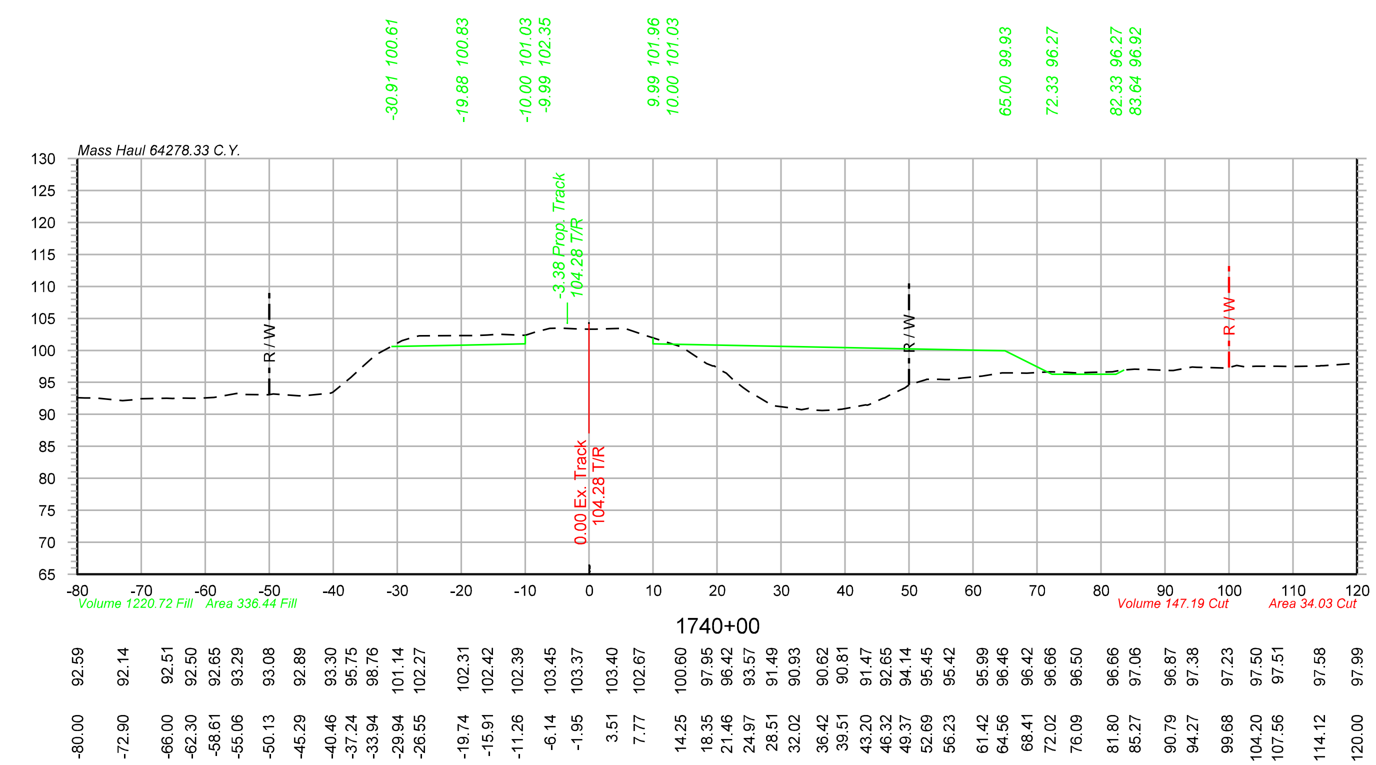
Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

Color table: F:\PROJECTS\011-1345\color\UPRR.tbl
\\omhq5573\iparm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8i_Pentable.tbl
F:\Projects\011-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014









OLSSON® ASSOCIATES
2111 South 67th Street, Suite 200 Omaha, NE 68106-2810 TEL 402.341.1116 FAX 402.341.5895 www.olssonassociates.com

UNION PACIFIC

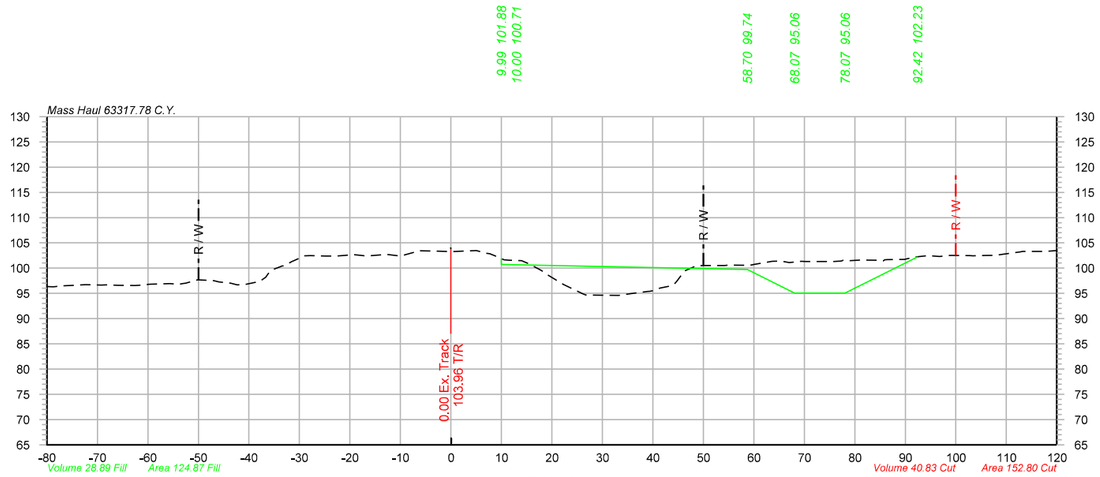
DRAWN BY: BWG	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design/Construction
CHECKED BY: RCK	LOCATION & DESCRIPTION: Mosier, Oregon Portland Subdivision MP 66.98 to MP 72.35 Construct Second Mainline
DATE: 10/20/2014	
SHEET NUMBER X 138 of 139	SHEET TITLE: CROSS SECTIONS STA.1738+00 TO STA.1741+00

0.0' Offset is Centerline Ex. Main Trk. No. 1

Clearing & Grubbing: 25.67 AC.
Subballast: 19,475 C.Y.
Seeding: 12.74 AC.

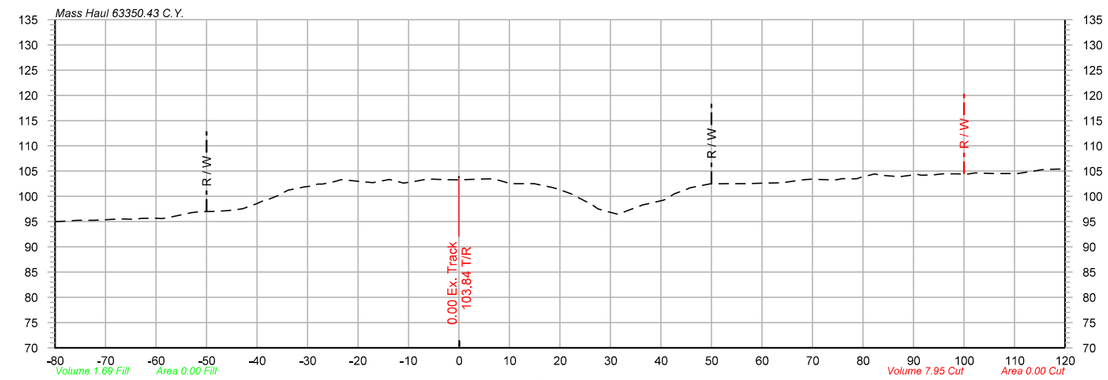
Proposed Subgrade Left
Sta 1457+54.66 To Sta 1589+52.23
Cut: 13,829 C.Y.
Fill: 34,380 C.Y.
Net: -20,551 C.Y.

Proposed Subgrade Left & Right
Sta 1638+26.54 To Sta 1742+42.20
Cut: 33,186 C.Y.
Rock Excavation: 58,752 C.Y.
Fill: 28,587 C.Y.
Net: 63,351 C.Y.



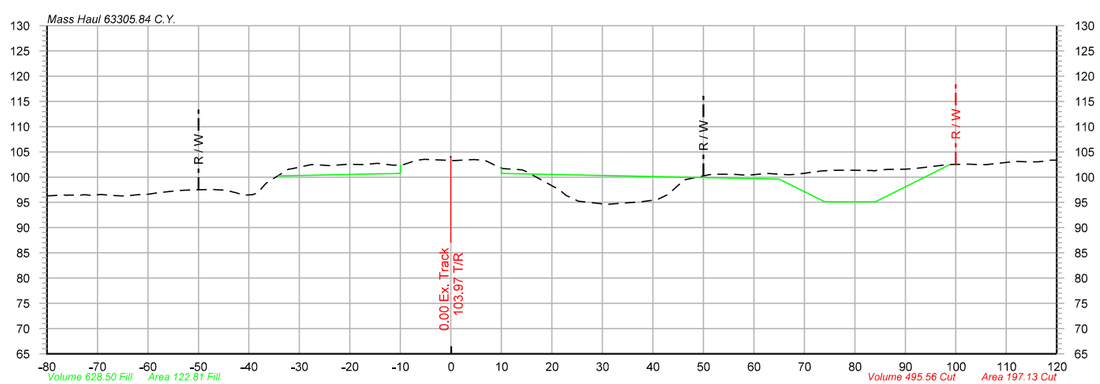
1742+00

-80.00	96.34	
-75.41	96.57	
-72.32	96.74	
-69.22	96.66	
-65.95	96.60	
-62.53	96.57	
-55.71	96.94	
-52.54	97.02	
-47.69	97.55	
-43.58	97.02	
-40.52	96.81	
-36.69	98.18	
-33.38	100.42	
-29.41	102.24	
-24.91	102.40	
-20.96	102.53	
-17.76	102.54	
-13.14	102.69	
-9.50	102.50	
-6.39	103.41	
-2.32	103.37	
3.00	103.40	
7.07	102.93	
10.53	101.65	
13.99	101.46	
17.48	99.75	
22.28	96.76	
26.07	94.93	
33.24	94.58	
39.06	95.37	
43.71	96.53	
48.35	100.33	
51.39	100.51	
55.01	100.62	
58.83	100.55	
63.64	101.34	
67.03	101.12	
70.27	101.32	
74.82	101.32	
77.89	101.57	
81.21	101.60	
84.45	101.58	
89.81	101.74	
94.52	102.46	
98.02	102.49	
102.80	102.46	
106.22	102.50	
112.88	103.22	
116.20	103.31	
119.95	103.50	



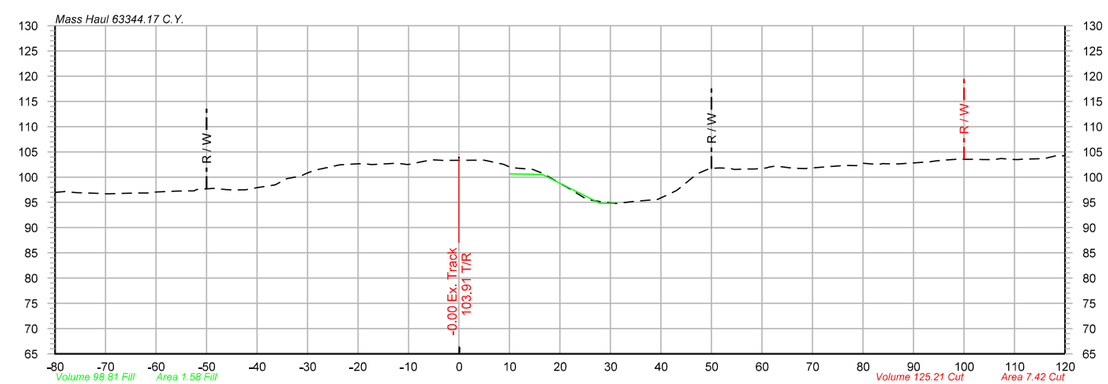
1743+00

-80.00	95.01	
-75.55	95.28	
-72.39	95.28	
-67.52	95.53	
-64.28	95.45	
-59.97	95.69	
-53.05	96.75	
-48.53	97.03	
-43.05	97.51	
-40.04	98.57	
-35.79	100.17	
-31.96	101.61	
-28.03	102.43	
-24.60	102.95	
-17.22	102.74	
-13.81	103.35	
-8.49	103.03	
-2.67	103.32	
2.09	103.34	
5.93	103.49	
10.14	102.52	
13.64	102.52	
18.29	101.79	
22.27	100.49	
26.17	98.48	
29.95	96.86	
36.36	98.30	
40.41	99.23	
45.09	101.41	
49.72	102.49	
52.89	102.50	
55.94	102.53	
59.64	102.60	
63.46	102.68	
67.09	103.16	
70.12	103.40	
73.76	103.26	
78.05	103.49	
82.31	104.44	
87.26	103.88	
90.75	104.33	
94.02	104.25	
100.57	104.43	
106.15	104.50	
110.65	104.50	
114.44	105.09	
119.68	105.43	



1741+94

-80.00	96.30	
-76.78	96.46	
-73.34	96.44	
-69.28	96.58	
-64.87	96.27	
-60.31	96.56	
-54.61	97.27	
-47.35	97.57	
-42.40	96.86	
-39.26	96.54	
-32.52	101.34	
-27.66	102.50	
-23.97	102.26	
-20.73	102.54	
-17.45	102.50	
-11.75	102.40	
-7.39	103.16	
-0.34	103.31	
4.56	103.50	
7.87	102.76	
11.57	101.60	
15.00	101.07	
20.51	98.03	
23.53	96.05	
30.97	94.61	
37.56	95.11	
40.67	95.46	
46.11	99.33	
51.40	100.52	
55.07	100.57	
58.67	100.34	
62.61	100.73	
66.68	100.47	
73.53	101.25	
80.08	101.36	
83.39	101.31	
89.78	101.58	
92.89	101.82	
98.06	102.43	
102.66	102.56	
106.34	102.50	
111.01	103.02	
114.39	103.04	
117.56	103.15	



1742+42

-80.00	96.98	
-75.99	96.95	
-71.20	96.79	
-65.20	96.81	
-61.33	96.85	
-56.04	97.22	
-52.50	97.29	
-49.17	97.74	
-46.00	97.54	
-42.57	97.49	
-36.58	98.45	
-31.28	100.24	
-27.81	101.53	
-23.59	102.45	
-19.00	102.71	
-12.74	102.73	
-6.63	103.21	
-3.17	103.33	
4.81	103.37	
8.85	102.51	
14.63	101.54	
17.88	100.00	
21.38	98.03	
24.51	96.12	
28.02	95.16	
31.12	94.77	
34.96	95.22	
39.33	95.57	
43.16	97.39	
46.83	100.41	
49.98	101.65	
53.72	101.75	
58.49	101.61	
62.41	102.17	
66.03	101.78	
73.08	102.07	
76.54	102.31	
79.70	102.77	
82.85	102.51	
85.99	102.55	
89.33	102.77	
93.21	103.04	
98.91	103.55	
103.75	103.50	
107.31	103.70	
110.87	103.50	
116.06	103.70	
120.00	104.21	

OLSSON ASSOCIATES
2111 South 67th Street, Suite 200
Omaha, NE 68106-2010
TEL 402.341.1116
FAX 402.341.5895
www.olssonassociates.com

UNION PACIFIC

DRAWN BY: BWG
CHECKED BY: RCK
DATE: 10/20/2014
SHEET NUMBER: X 139 of 139

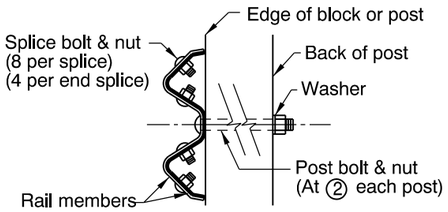
UNION PACIFIC RAILROAD
Office of Assistant Vice President
Engineering Design/Construction

LOCATION & DESCRIPTION:
Mosier, Oregon
Portland Subdivision MP 66.98 to MP 72.35
Construct Second Mainline

SHEET TITLE:
CROSS SECTIONS STA.1741+94 TO STA.1743+00

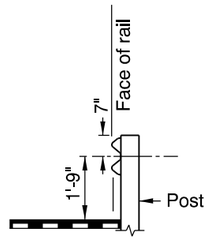
Color table: F:\PROJECTS\OII-1345\color\UPRR.tbl
\\omha5573\parm\CAD_Config\Bentley\Workspace\Standards\tables\Pen\UPRR_V8_Pentable.tbl
F:\Projects\OII-1345_TRNS\19_Mosier East\Design\DGN\Sheets\07_X-Sections\070073-TR-XS.dgn
Default
10/20/2014

NOTES:
1. Rail height measured from final paved surface at face of rail (Typ. all types).
2. Final paved surfacing to extend to face of post.
3. Drainage curb alignment same as face of guardrail.



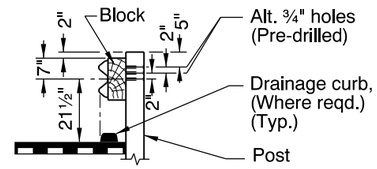
1. When required by the plans, post bolts to extend beyond the tightened nuts within limits of ¼" to ½".
2. When steel posts are used see "APPURTENANCES" for modified bolt detail, Std. Drg. RD415.
3. All post bolt threads to be set after assembly for wrench removal only.

FITTINGS

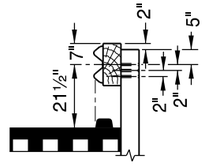


TYPE 1
(Use restricted to non-roadway applications)

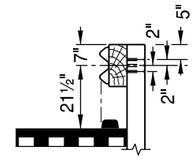
GUARDRAIL



INITIAL INSTALLATION

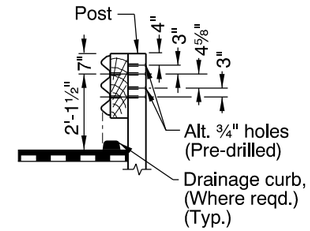


FUTURE ADJUSTMENT

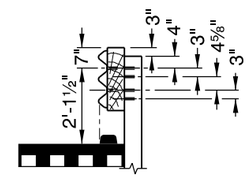


ALTERNATE
INITIAL INSTALLATION
OR FUTURE ADJUSTMENT

TYPES 2A & 3
(See General Note 3)
(For Type 3 use double thickness (2) rail elements)

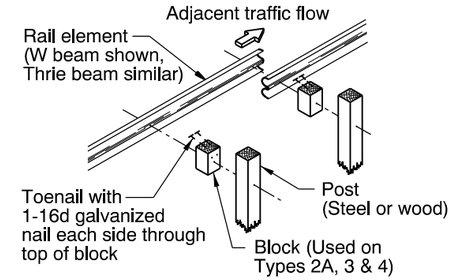


INITIAL INSTALLATION



RAIL AFTER OVERLAY
(Adjust as shown)
TYPE 4

ASSEMBLY DETAILS



RELATION OF PARTS

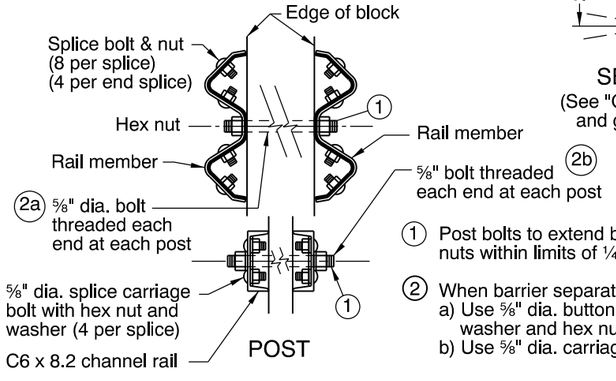
TABLE OF POST SPACING				
TYPE	1	2A	3	4
SPACING	12'-6"	6'-3"	3'-1½"	6'-3"

NORMAL RAIL ELEMENT DATA			
Type	Rail	Effective Lengths	Thkn. *
1, 2A, 3	W beam	6.25', 12.5', 25'	0.105" & 0.135"
4	Thrie beam	6.25', 12.5', 25'	0.105" & 0.135"

* Base metal thkn. nom. (Before galv.)

METAL MEDIAN BARRIER

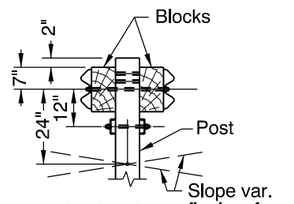
NOTE:
Median barrier post spacing 6'-3".
See end construction for variations.



POST

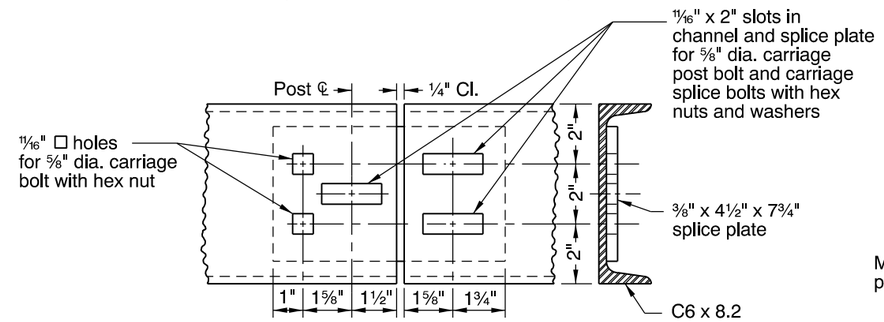
① Post bolts to extend beyond the tightened nuts within limits of ¼" to ½".

② When barrier separates to double post mounting:
a) Use ⅝" dia. button or alternate bolt with washer and hex nut.
b) Use ⅝" dia. carriage bolt with washer and nut.



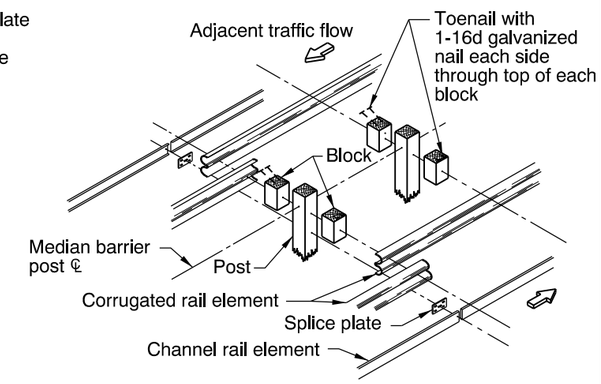
SECTION
(See "Guardrail" details and general note 3)

CHANNEL RAIL AND SPLICE PLATE
(METAL MEDIAN BARRIER)



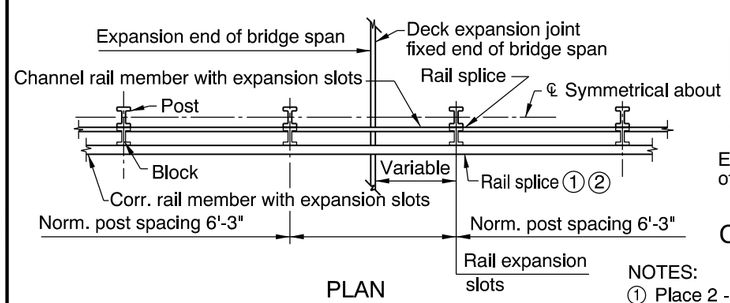
NOTE:
Clearance to be 1⁹⁄₁₆" at rail splice for bridge expansion joints.

ASSEMBLY DETAILS

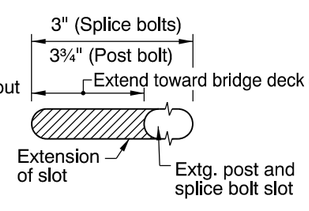


RELATION OF PARTS

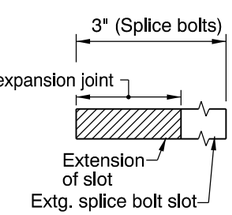
METAL MEDIAN BARRIER/SHOULDER GUARDRAIL INSTALLATION AT BRIDGE DECK EXPANSION JOINT



PLAN



CORRUGATED RAIL



CHANNEL RAIL AND SPLICE PLATE

NOTES:
① Place 2 - 1⁄32" polytetrafluoroethylene (TFE) sheets between corrugated rail members. The sheets shall be 12½" x 1'-7".

② Adjust nuts to provide a sliding fit and set threads to prevent loosening.

GENERAL NOTES FOR ALL DETAILS:

1. For details of parts, see Std. Drgs. RD405, RD410 & RD415.
2. For details of guardrail installation, see Std. Drgs. RD420, RD425, RD430, RD435 & RD440.
3. Use "Alternate Initial Installation", at bridge ends (See Std. Drg. RD440), adjacent to P.C.C. pvmt., for temporary guardrail, to match existing guardrail, for Type 1 rail or as directed.
4. See Std. Drg. RD701 for drainage curbs, where required.
5. Lap guardrail in direction of adjacent traffic.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 13-JAN-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

GUARDRAIL AND METAL MEDIAN BARRIER

2008

DATE	REVISION DESCRIPTION
06-2009	REVISED DETAILS & NOTES
12-2009	REVISED NOTES
01-2011	REVISED AND ADDED NOTES
01-2014	REVISED NOTES & TABLE

13-JAN-2014

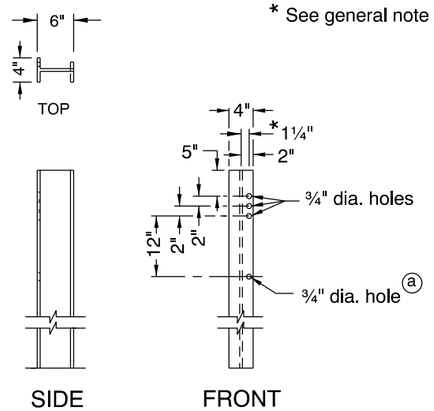
rd400.dgn

RD400

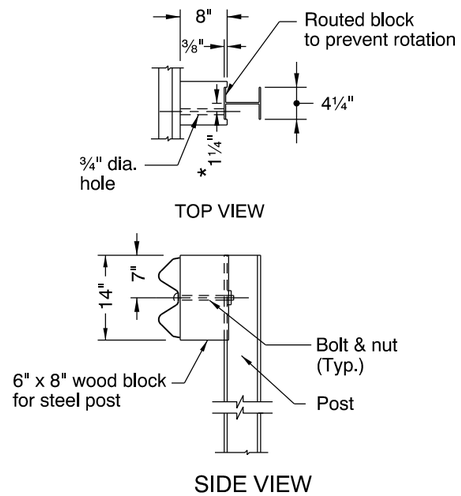
Effective Date: June 1, 2014 - November 30, 2014

POSTS

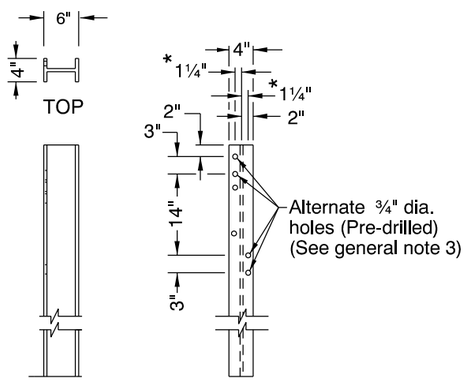
STEEL



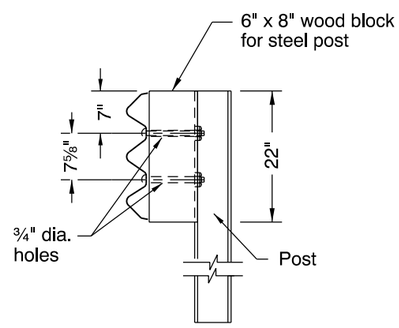
TYPE 2A, 3 OR METAL MEDIAN BARRIER



TYPE 2A, 3 OR METAL MEDIAN BARRIER
WOOD BLOCK FOR STEEL POST



TYPE 4 OR TYPE 4 (TRANSITION) POST

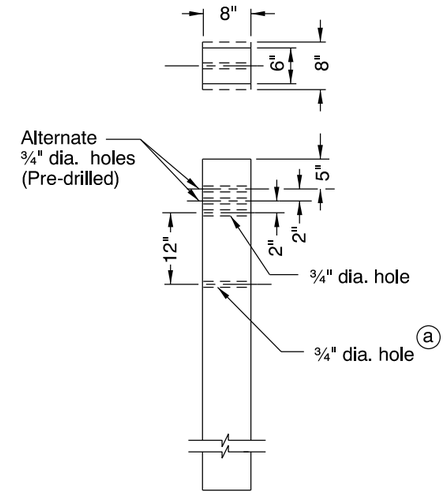


TYPE 4 OR TYPE 4 (TRANSITION) BLOCK
(Routing not required)

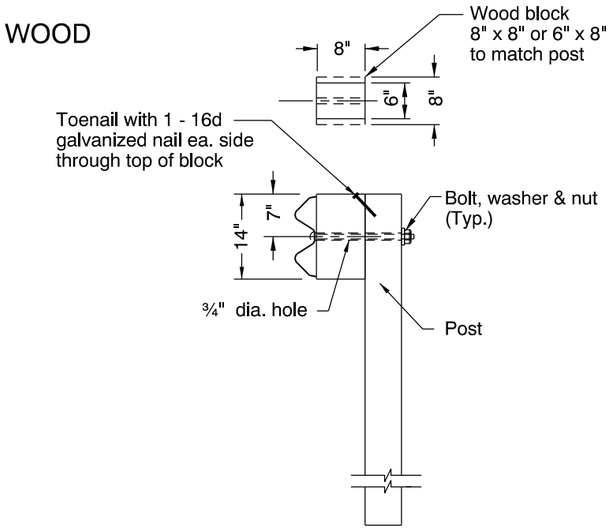
ⓐ Lowest hole(s) required only where channel rail is to be installed. Drill 12" below top ¾" hole(s) used. (See general note 4)

GUARDRAIL POST TABLE				
GUARDRAIL TYPE	POST SIZE		POST LENGTH	
	WOOD	STEEL *	WOOD	STEEL
1	6" x 8" or 8" x 8"	—	6'-0"	—
2A	6" x 8" or 8" x 8"	W6 x 9	6'-0"	6'-6"
3	8" x 8"	W6 x 9	6'-0"	6'-6"
Metal median barrier	8" x 8"	W6 x 9	6' 6"	6'-6"
4	6" x 8" or 8" x 8"	W6 x 9	7'-0"	7'-0"
4 (Transition)	8" x 8"	W6 x 9	6'-0"	6'-9"

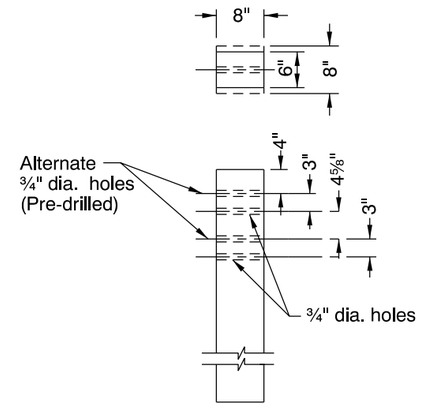
WOOD



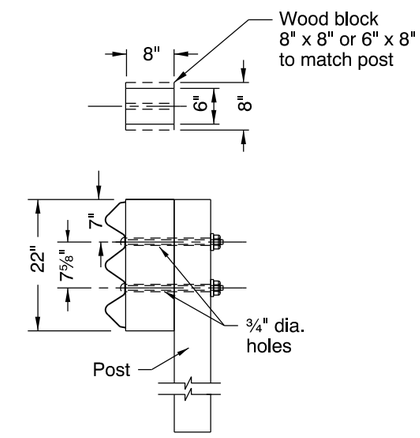
TYPE 1, 2A, 3 OR
METAL MEDIAN BARRIER



TYPE 2A, 3 OR
METAL MEDIAN BARRIER



TYPE 4 OR TYPE 4 (TRANSITION)
POST



TYPE 4 OR TYPE 4 (TRANSITION) BLOCK

GENERAL NOTES FOR ALL DETAILS:

1. See Std. Drg. RD400 for alternate hole useage requirements.
2. For assembly, installation, and appurtenance details, see Std. Drgs. RD400, RD410, RD415, RD420, RD425, RD430, RD435, RD440.
3. See Bridge Drgs. for bridge transition guardrail post & block requirements. Multiple holes are not required in bridge transition rail posts.
4. Posts and blocks to be pre-drilled for the intended guardrail installation.
5. Post and block dimensions are nominal.
6. Steel posts are shifted to accomodate bolt holes.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 13-JAN-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

GUARDRAIL AND METAL MEDIAN BARRIER PARTS

2008

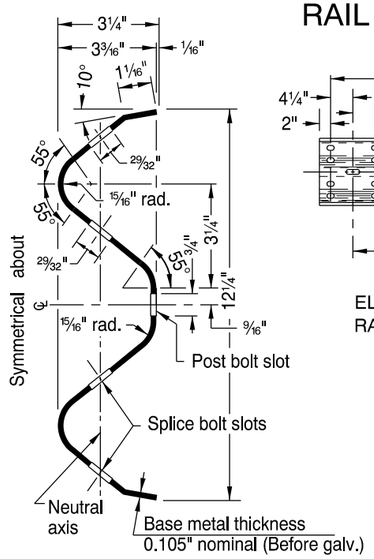
DATE	REVISION DESCRIPTION
06-2009	REVISED DETAILS & NOTES
12-2009	REVISED DETAILS & NOTES
01-2014	REVISED DETAILS & NOTES

rd405.dgn 13-JAN-2014

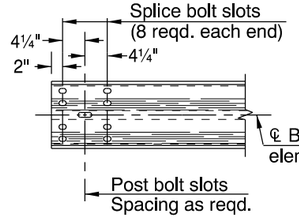
RD405

Effective Date: June 1, 2014 - November 30, 2014

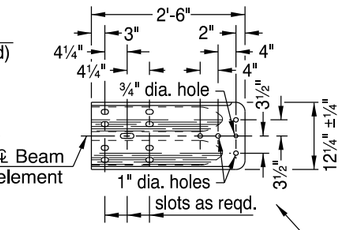
RAIL MEMBERS



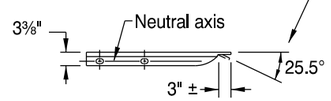
SECTION THRU RAIL ELEMENT



ELEVATION OF RAIL ELEMENT



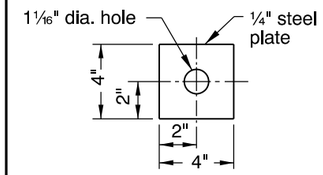
25.5° bend and hole reqd. only for use with alternate Type "C" end piece.



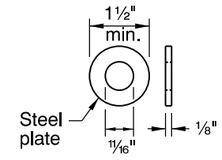
Base metal thickness 0.135" nominal (Before galv.)

TERMINAL CONNECTOR

APPURTENANCES

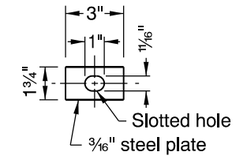


SNOW LOAD (OPTIONAL)
(In area of heavy snow, as directed by the engineer)



PLAIN ③

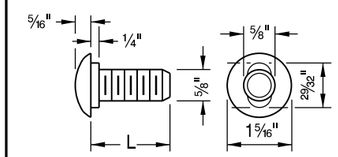
USE ON BACK OF POST



RECTANGULAR

USE ON RAIL ELEMENT FACE ON TYPE C END PIECE ④

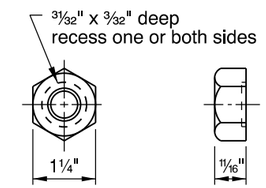
WASHERS



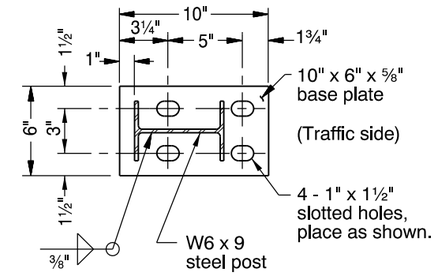
ALTERNATIVE No. 1

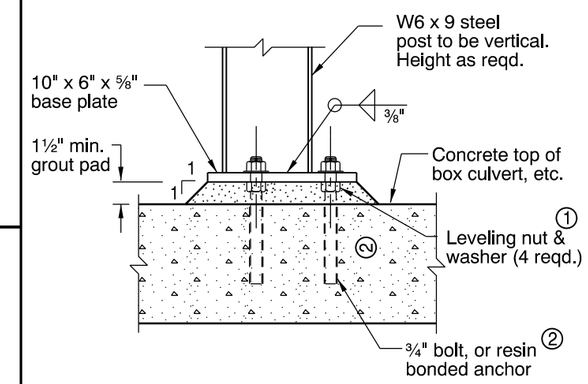
ALTERNATIVE NO. 2

L (in.)	Thread Length
1¼	Full length
2	1½" min.
9½	2" min.
18	3½" min.
25	3" min.



POST OR SPLICE BOLT AND NUT

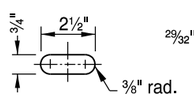




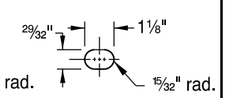
BASE PLATE DETAILS
(For additional details, see Std. Drg. BR266)
(Use when depth of cover is less than normal for post installation.)

NOTES:

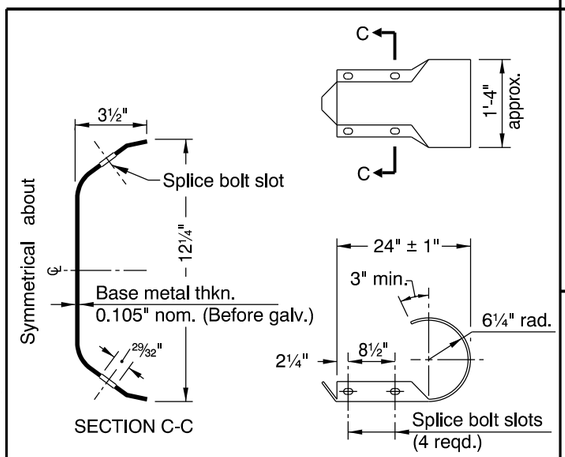
1. For guardrail installed on radii of 150' or less (5' min. radius) use rail elements pre-curved to industry standard. Install "Radius Identification Plate" (See detail right).
2. Effective length of rail sections shall be 12'-6".



POST BOLT SLOT

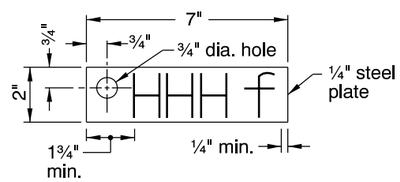


SPLICE BOLT SLOT

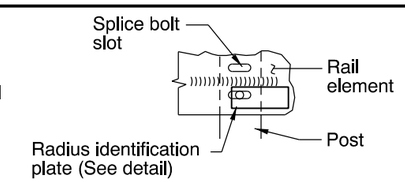


SECTION C-C

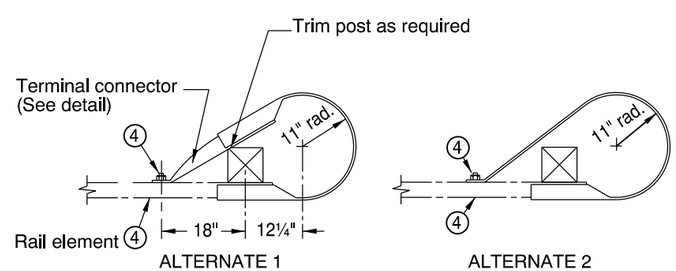
TYPE B END PIECE



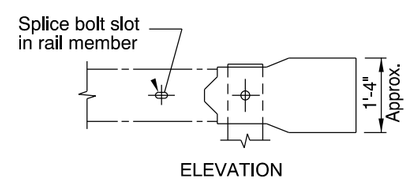
RADIUS IDENTIFICATION PLATE
(See general note 4)



RADIUS IDENTIFICATION PLATE MOUNTING DETAIL
(See general note 5)



ALTERNATE 1 ALTERNATE 2



ELEVATION

TYPE C END PIECE
(For details not shown, see Type B End Piece)

NOTES:

① Furnished & installed by structure contractor when shown on structure plans.

② 6" min. penetration into concrete slabs other than bridge decks. Cast in place or core and install using approved resin bonding system.

③ Not required if "Snow Load" washer option is used.

④ Use rectangular washer under bolt head and nut on Type C End Piece as shown.

GENERAL NOTES FOR ALL DETAILS:

1. For assembly and installation details, see Std. Drgs. RD400, RD405, RD420, RD425, RD430, RD435 & RD440.
2. For details of guardrail connections to structural handrails, see special details or Standard Drawings as called for on plans.
3. All indicated welds shall attain the full strength of the section welded.
4. Radius dimensions, in feet to the nearest 0.5 foot, shall be placed on the plate with a raised weld bead replacing the letters "HHH", shown on the Radius Identification Plate detail. Digits shall be 1½" min. height and ¾" max. width. Plate shall be galvanized after placement of digits.
5. The guardrail radius identification plate is to be mounted on the back side of the rail element with the lowest splice bolt nearest the P.C. of the guardrail radius.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 14-JAN-2010

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

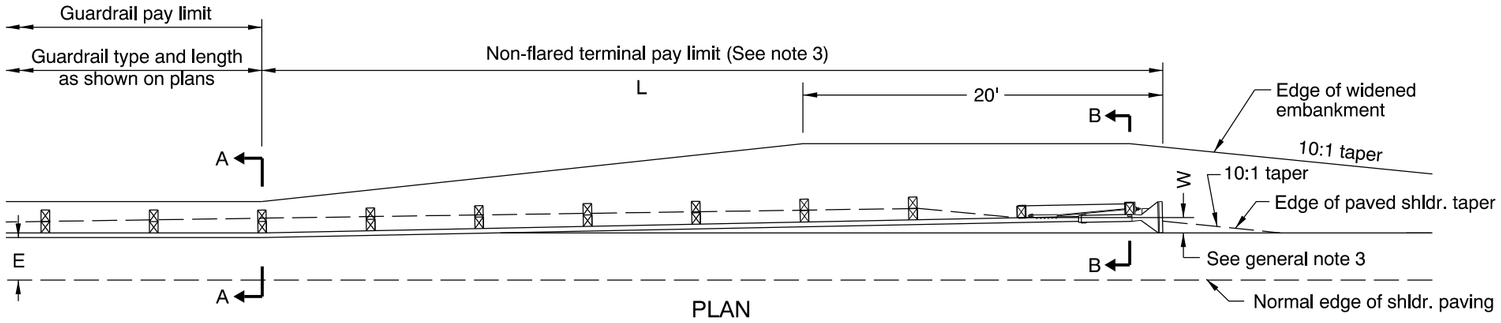
OREGON STANDARD DRAWINGS

GUARDRAIL AND METAL MEDIAN BARRIER PARTS

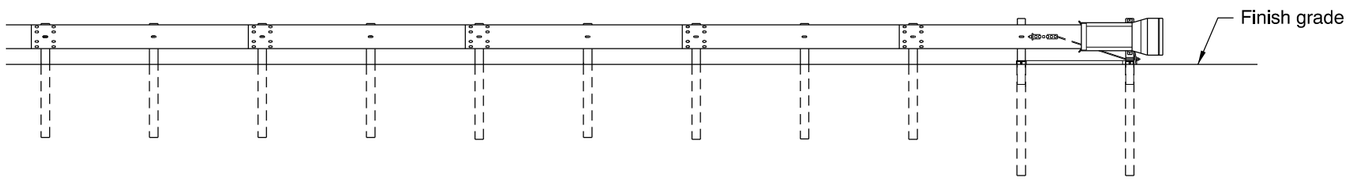
2008

DATE	REVISION DESCRIPTION
12-2009	REVISED DETAILS AND NOTES

Effective Date: June 1, 2014 - November 30, 2014



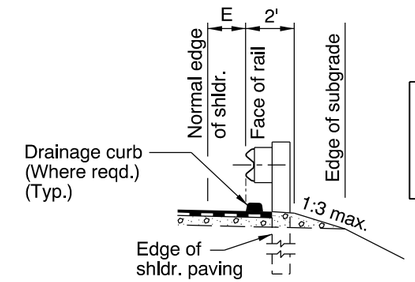
PLAN



ELEVATION
NON-FLARED OPTION

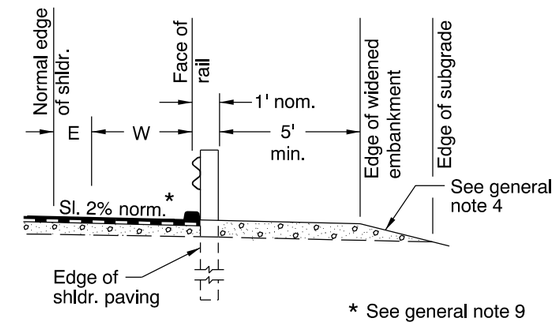
TEST LEVEL	L (ft)	W (ft)
2 (≤ 45 mph)	25	1 to 2 **
3 (> 45 mph)	37.5 or 50	1 to 2 **

** See general note 3



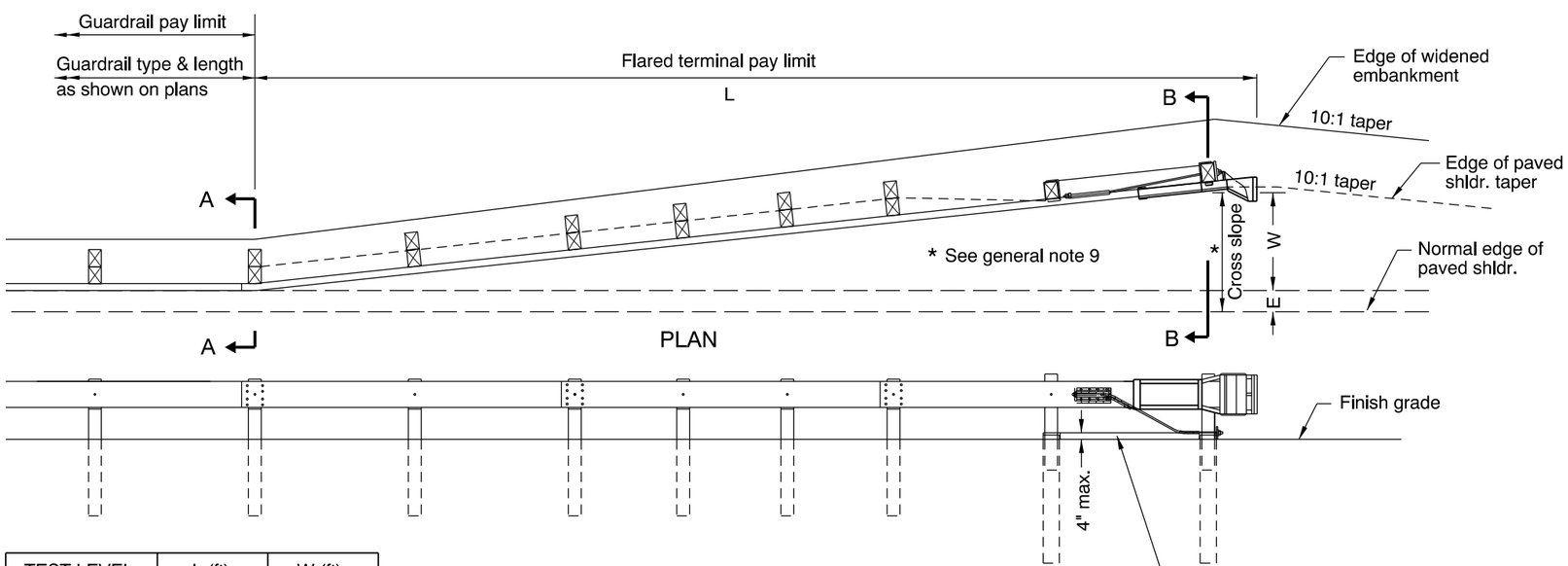
SECTION A-A

NOTES:
1. E=2', where shown on plans.
2. Drainage curb alignment same as face of guardrail.



SECTION B-B

* See general note 9



TEST LEVEL	L (ft)	W (ft)
2 (≤ 45 mph)	25	1.67 to 2.67
3 (> 45 mph)	37.5	2.5 to 4.0

ELEVATION
STRAIGHT FLARE OPTION
(Flare rate varies, see table)

GENERAL NOTES FOR ALL DETAILS:

1. For details not shown, see Std. Drgs. RD400, RD405, RD410, RD415 & RD435.
2. On two way two lane highways, both ends of guardrail runs shall be provided with a terminal flared or non-flared. Paving of widened shldr. on both ends of guardrail runs is required.
3. Non-flared terminal shall be installed with a min. 1-foot offset ensuring that the end piece is entirely off normal shldr.
4. 1:4 slope or flatter preferable, 1:3 max.
5. Provide terminal from ODOT's QPL. Install according to manufacturer's recommendations. Provide Shop Drawings to Engineer.
6. Install fixed object marker on head of every terminal with "W" 4 feet or less.
7. "W" distance is measured to face of guardrail at end post, exclusive of end piece.
8. See Std. Drg. RD701 for drainage curbs, where required.
9. Cross slope to match adjacent roadway cross slope (preferred).
   If required, maximum shoulder slope 10% for guardrail widening.
   If required, maximum grade break at normal edge of shoulder 8%.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 10-JAN-2012

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

ENERGY ABSORBING TERMINAL

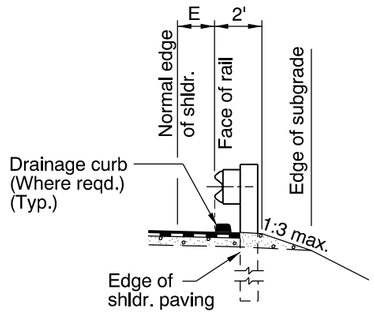
2008

DATE	REVISION DESCRIPTION
06-2009	REVISED DETAILS & NOTES
07-2010	REVISED DETAILS & NOTES
01-2011	REVISED NOTES
01-2012	REVISED & ADDED NOTES

rd420.dgn 11-JAN-2012

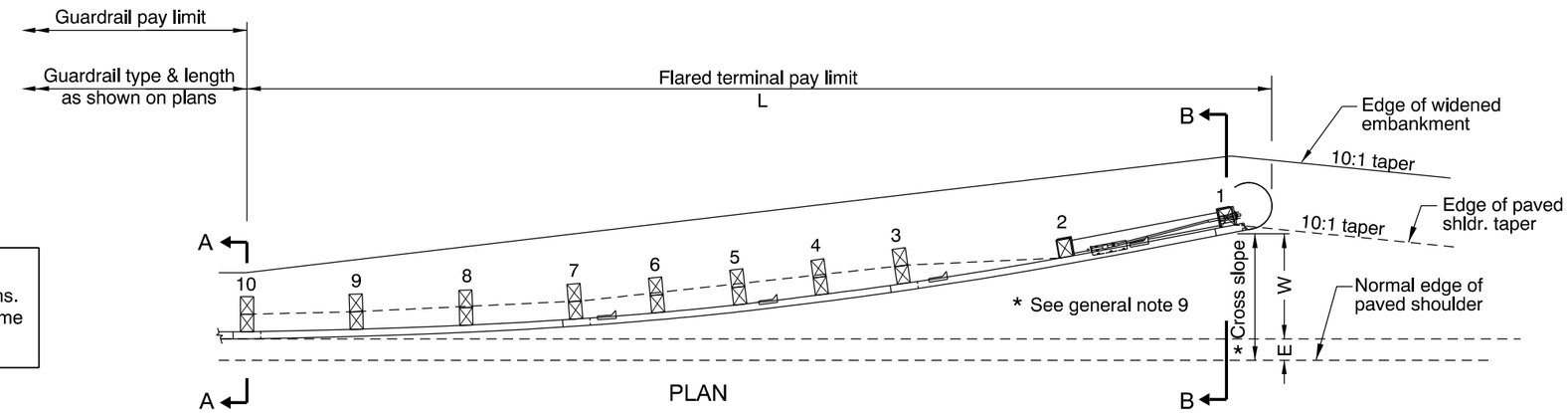
RD420

Effective Date: June 1, 2014 - November 30, 2014

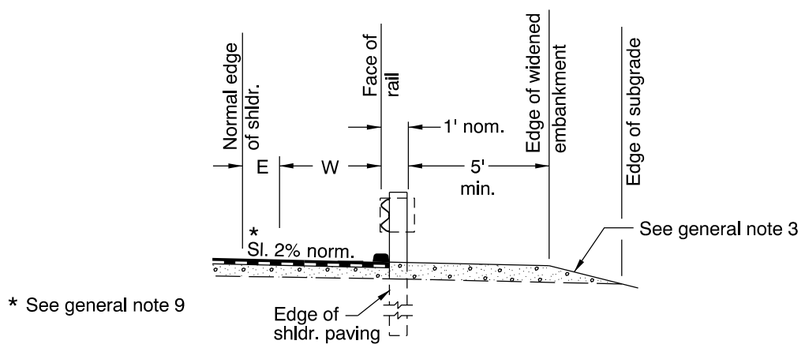


SECTION A-A

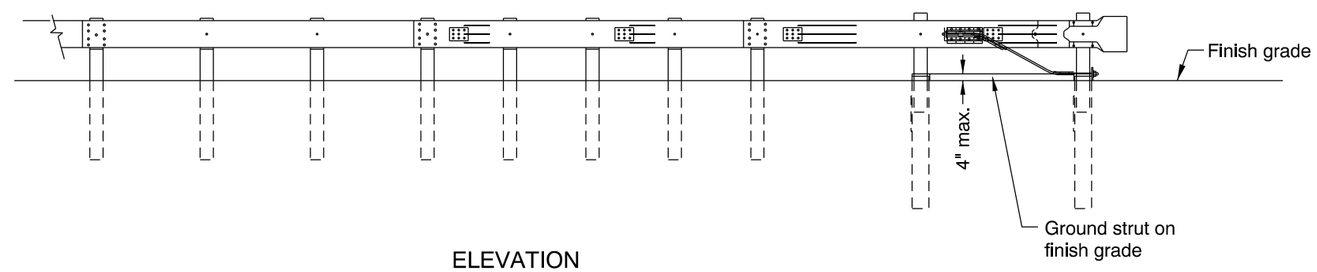
NOTES:
1. E = 2', where shown on plans.
2. Drainage curb alignment same as face of guardrail.



PLAN



SECTION B-B



ELEVATION
PARABOLIC FLARE TERMINAL

GENERAL NOTES FOR ALL DETAILS:

1. For details not shown, see Std. Drgs. RD400, RD405, RD410, RD415 & RD435.
2. On two way two lane roads, both ends of guardrail runs shall be provided with a terminal. Paving of widened shldr. on both ends of guardrail runs is required.
3. 1:4 slope or flatter preferable, 1:3 max.
4. Provide flared terminal from ODOT's QPL. Install according to manufacturer's recommendation. Provide shop drawings to engineer.
5. Install fixed object marker on head of every terminal with "W" 4 feet or less.
6. This terminal may be used on state highway projects providing a reasonable recovery area exists behind the terminal or can be provided. See Highway Design Manual Section 4.6 Design Criteria/Establishment of Variable-Sized Recovery Areas for guidance.
7. "W" distance is measured to face of guardrail at end post, exclusive of end piece.
8. See Std. Drg. RD701 for drainage curbs, where required.
9. Cross slope to match adjacent roadway cross slope (preferred). If required, maximum shoulder slope 10% for guardrail widening. If required, maximum grade break at normal edge of shoulder 8%.

TEST LEVEL	L (ft)	W (ft)
3 (> 45 mph)	37.5	3.0 or 4.0

CALC. BOOK NO. N/A

BASELINE REPORT DATE 07-JAN-2013

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

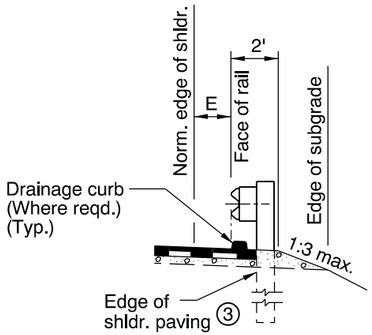
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

NON ENERGY-ABSORBING TERMINAL 3' OR 4' FLARE

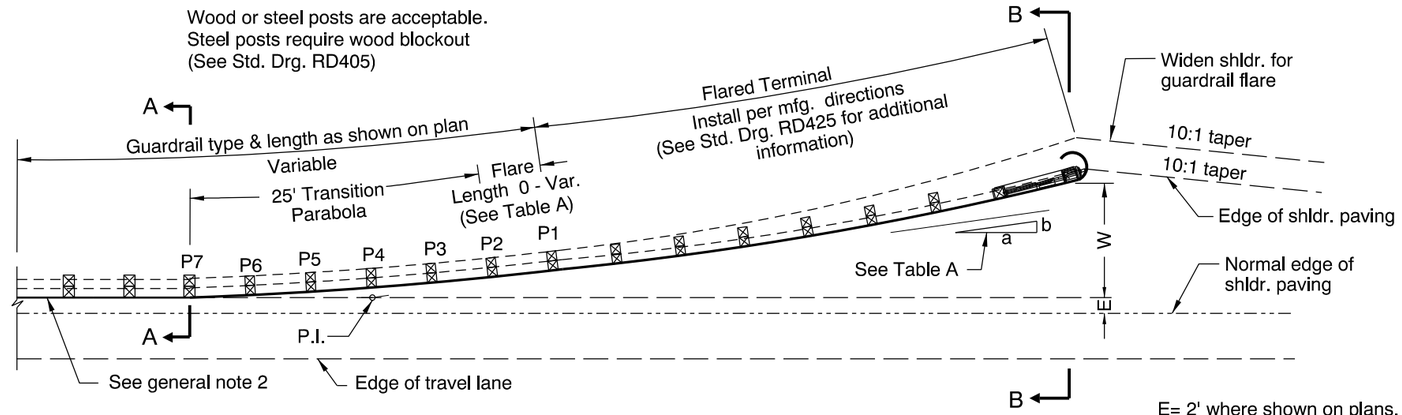
2008

DATE	REVISION DESCRIPTION
06-2009	REVISED DETAILS & NOTES
07-2010	REVISED NOTES
01-2011	REVISED NOTES
01-2013	REVISED NOTE



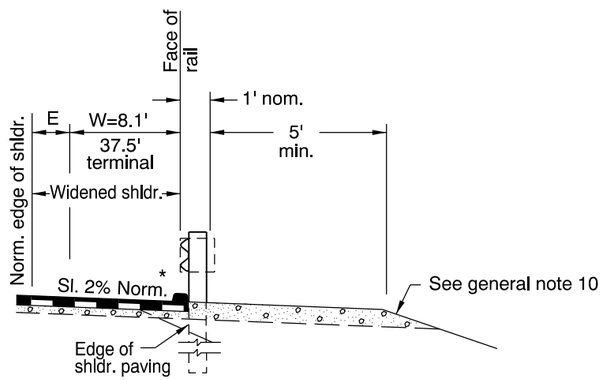
SECTION A-A

NOTES:
1. E = 2', where shown on plans.
2. Drainage curb alignment same as face of guardrail.

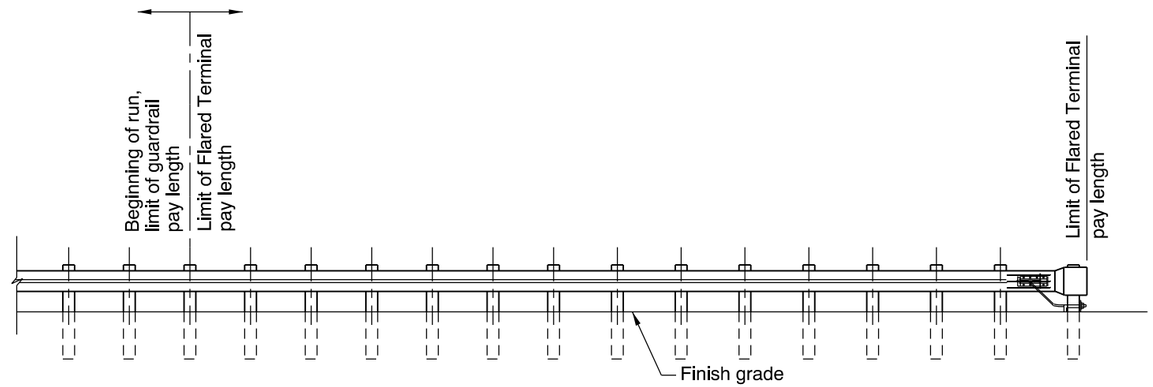


E= 2' where shown on plans.

PLAN



SECTION B-B



ELEVATION

* See general note 11

TABLE A

FOR "W" = 8.1' (25' TRANSITION PARABOLA), 12.5' FLARE LENGTH

FLARE RATE a:b	NORMAL FLARE LENGTH (ft)	NORMAL W (ft)		25' TRANSITION PARABOLA					12.5' FLARE	
				P7	P6	P5	P4	P3	P2	P1
			X (ft)	0	6.25	12.49	18.72	24.92	31.15	37.38
15:1	12.5	8.1	Y (ft)	0	.05	.21	0.47	.83	1.25	1.66

See plan above for additional information

The "Y" dimensions are offset from the tangent line of guardrail.

W=8.1' TERMINAL

(Embankment)

GENERAL NOTES FOR ALL DETAILS:

1. For details not shown, see Std. Drgs. RD400, RD405, RD410, RD415, RD420, RD425 & RD435.
2. Paving of widened shldr. on both ends of guardrail runs is required.
3. Type 2A guardrail shown.
4. Trailing ends (freeway, multilane and similar oneway facilities) not exposed to opposing traffic:
   (a) Guardrail terminals, use a Type 1 modified anchor, Type B end piece and do not flare.
   (b) At bridge ends, omit Transition Guardrail & Type 3 guardrail and substitute the normal required guardrail.
5. (a) All bolts except adjustment bolts shall be drawn tight on rails and components on initial installation.
   (b) Final tightness check on rail and components bolts and retightening as required to be done 30 days after initial installation.
6. Provide flared terminal from ODOT's QPL. Install according to manufacturer's recommendation. Provide shop drawings to engineer.
7. This drawing is retained for maintenance purposes. Do not use for new construction.
8. "W" distance is measured to face of guardrail at end post, exclusive of end piece.
9. See Std. Drg. RD701 for drainage curbs, where required.
10. 1:4 slope or flatter preferable, 1:3 max.
11. Cross slope to match adjacent roadway cross slope (preferred).
    If required, maximum shoulder slope 10% for guardrail widening.
    If required, maximum grade break at normal edge of shoulder 8%.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 14-JAN-2011

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

GUARDRAIL INSTALLATION
WIDE FLARE TERMINAL (EMBANKMENT)

2008

DATE	REVISION DESCRIPTION
06-2009	REVISED DETAILS & NOTES
01-2011	ADDED & REVISED NOTES

rd430.dgn 14-JAN-2011

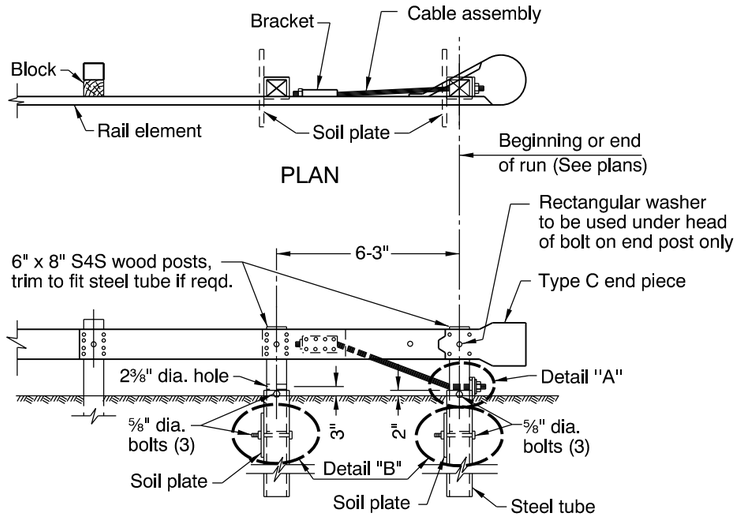
RD430

Effective Date: June 1, 2014 - November 30, 2014

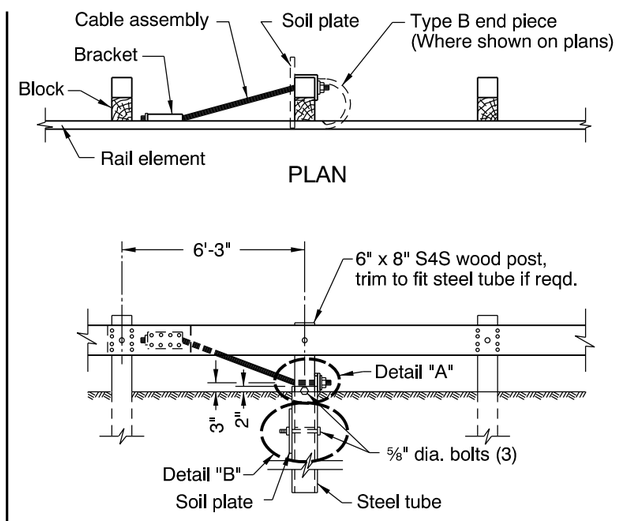
ANCHORS (Steel)

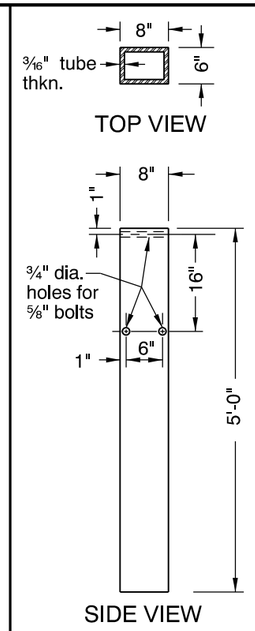
(Where shown on plans)

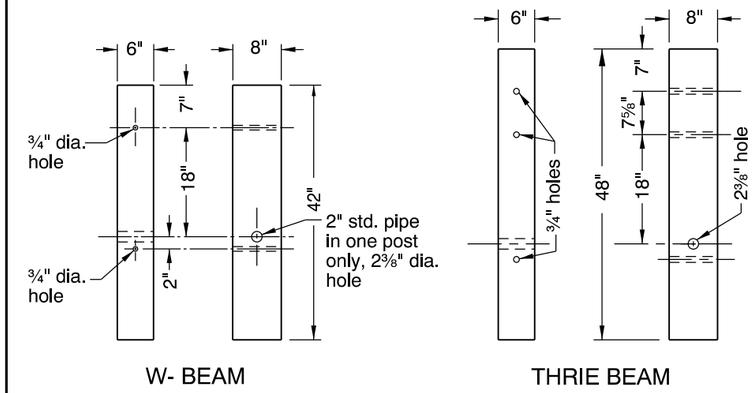
TYPE 1



TYPE 1 MODIFIED

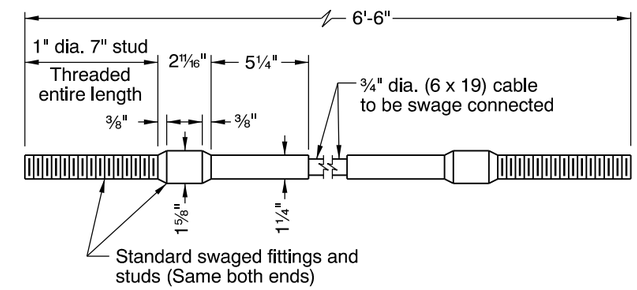




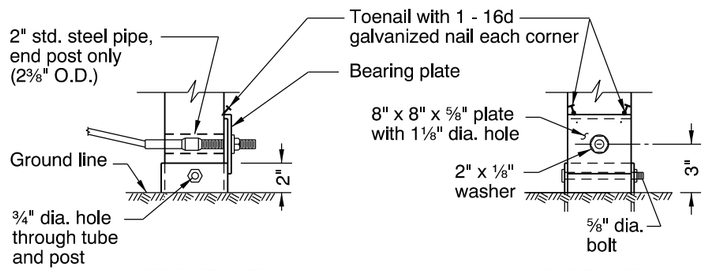


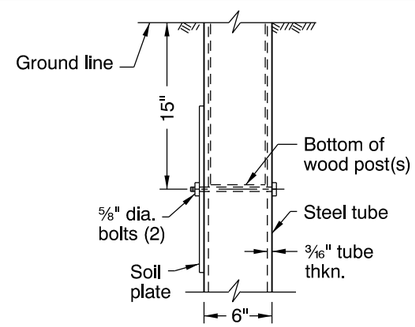
WOOD BREAKAWAY POSTS

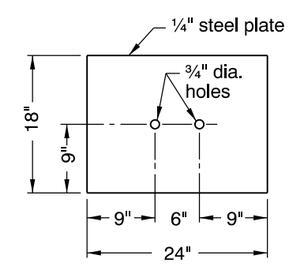
(6" x 8" posts only)

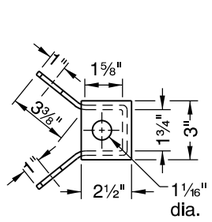


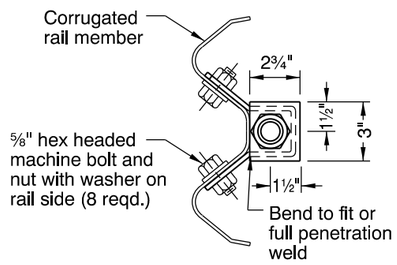
CABLE ASSEMBLY

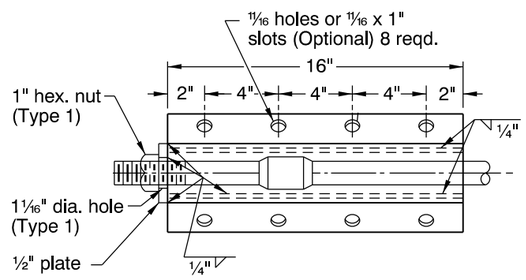






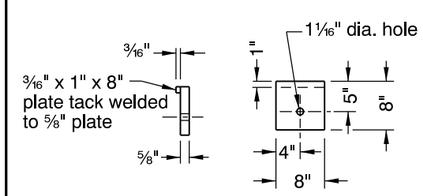






NOTE:
All plate for bracket to be ¼" thick steel, unless otherwise noted.

BRACKET



BEARING PLATE

GENERAL NOTES FOR ALL DETAILS:

1. (a.) Cable assembly to be tightened to a taut condition on initial installation.

   (b.) Final tension check and tightening of cable assembly as required to be done 30 days following initial installation.

2. See Std. Drgs. RD400 & RD405 for details not shown.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 13-JAN-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

GUARDRAIL ANCHORS (STEEL)

2008

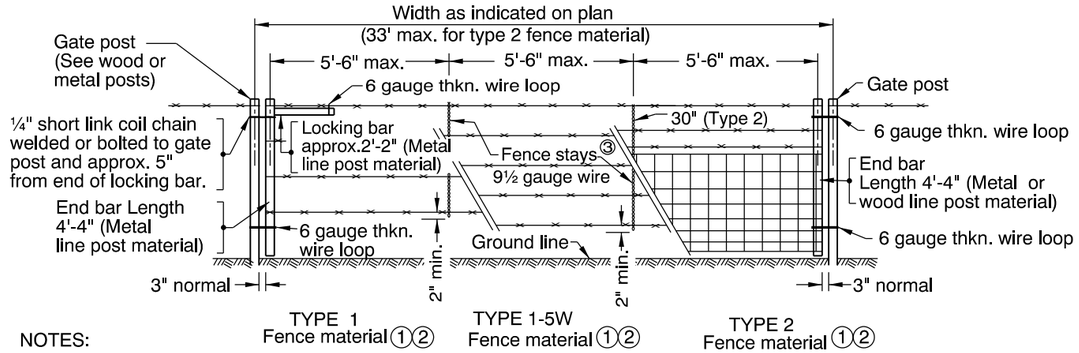
DATE	REVISION DESCRIPTION
12-2009	REVISED DETAILS & NOTES
07-2013	REVISED DETAILS & NOTES
01-2014	REVISED NOTES

rd450.dgn 13-JAN-2014

RD450

Effective Date: June 1, 2014 - November 30, 2014

GATEWAY



NOTES:

① Match adjointing fence type.
② For details not shown see fence type.
③ For wooden stays, see Type 1 fence details.

TYPES 1 , & 1-5W

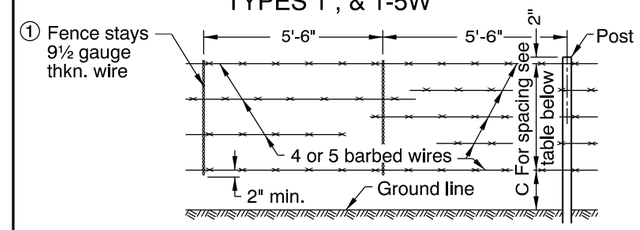
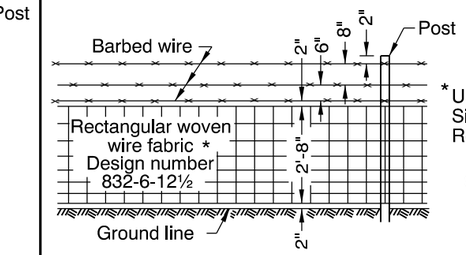


TABLE OF DIMENSIONS

FENCE	C	SPACING	NO. OF WIRES
Type 1	14"	12"	4
Type 1-5W	10"	10"	5

① NOTE:
Wooden Stays to be used in areas of heavy snowfall or snow drifts over 36". Stays to be 2" x 2" x 52" min. length, sound, untreated Douglas Fir, Western Hemlock or Western Pine, spaced as shown for wire stays and to rest firmly on the ground. Horizontal wires to be stapled are: single wires and a minimum of 4 wires for woven wire fabric.

② TYPE 2



* U.S. Dept. of Commerce Simplified Practice Recommendation R9-47.

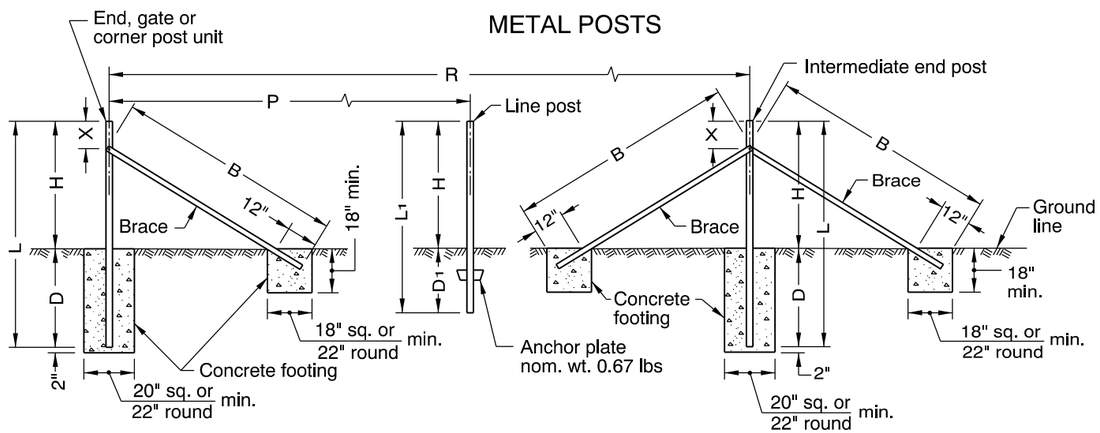
② NOTE:
For wooden stays, see Type 1 fence details

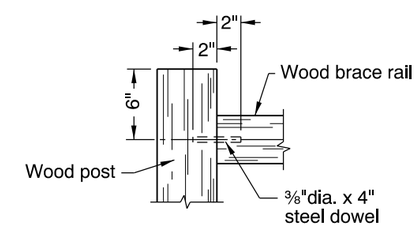
TABLE 1 (For wood posts)

FENCE	R (ft)	UNITS REQUIRED
Types 1, 1-5W & 2	20 or Less	* None
	20-330	A
	Over 330	A & B

* Unit A required at gate post.
Either Unit A or Units A & B are required in existing fence line at intersection with new fence line.

METAL POSTS





BRACE RAIL CONNECTION

TABLE 2

FENCE	R max.	P	L min.	L1 min.	H	D min.	D1 min.	B min.	X min.-max
All Types	660'	16'-6"	7'-6"	6'-6"	4'-4"	3'-2"	2'-2"	7'-8"	9"-22"

TABLE 3

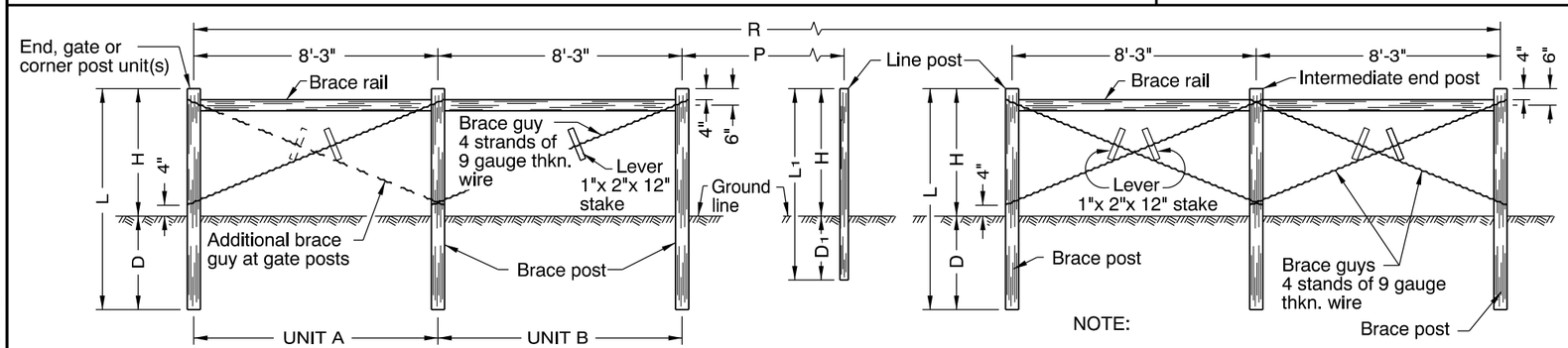
MEMBER	WOOD: * ROUND DIAMETER OF SMALL END (in) min.-max.	WOOD: * ROUND DIAMETER OF SMALL END (in) min. avg.	WOOD: SQUARE SIZE nominal (in)	METAL: SHAPE	METAL: WEIGHT PER (ft) nominal	METAL: SIZE nominal
Line Post	3" to 4"	3"	‡ 3" x 3"	Tee Channel ⓐ or U-bar	1.33 lb	ASTM A-702
Brace or Brace Rail	3½" to 5½"	4"	4" x 4"	Tubular	ⓑ	1½" +/- O.D.
				ⓐ Angle	3.19 lb	2" x 2" x ¼"
Other Post	4" to 7"	5"	‡ 5" x 5"	Tubular	ⓑ	2⅜" O.D.
				ⓐ Angle	4.1 lb	2½" x 2½" x ¼"

* Max. taper 1":48".
‡ Max. allowable size 1" additional in each dimension.

ⓐ In accordance with ASTM A 702.
ⓑ In accordance with AASHTO M 181.

GENERAL NOTES FOR ALL DETAILS:

1. For dimensions indicated by letter see Table 2.
2. Line post spacing same as dimension P.
3. For shapes, weights and dimensions of members see Table 3.
4. All concrete shall be commercial grade concrete.
5. See Std. Drg. RD820 for fence gates.



For units required see Table 1

NOTE:

1. For dimensions indicated by letter see Table 2.
2. Line post spacing same as dimension P.
3. For cross sectional dimensions of members see Table 3.

WOOD POSTS

CALC. BOOK NO. N/A

BASELINE REPORT DATE 18-JAN-2011

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

BARBED AND WOVEN WIRE FENCES

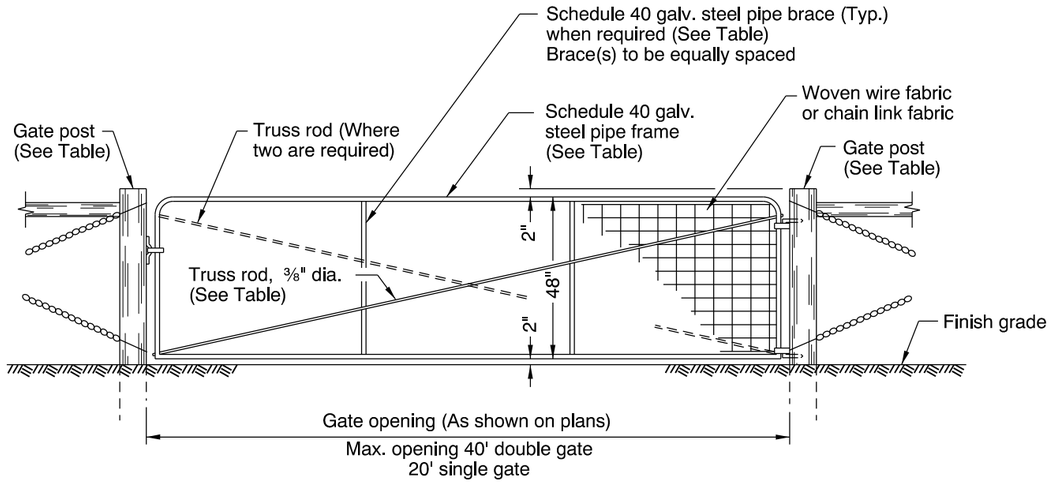
2015

DATE	REVISION DESCRIPTION

rd810.dgn 14-JUL-2014

RD810

Effective Date: February 1, 2015 - May 31, 2015



GATE COMPONENTS								GATE POSTS ① ②					
								WOOD				STEEL	
GATE OPENING (ft)		SCHEDULE 40 GALV. STEEL PIPE FRAME		SCHEDULE 40 GALV. STEEL PIPE BRACE			TRUSS RODS	* ROUND			SQUARE	SCHEDULE 40 GALV. STEEL PIPE	
								DIA. OF SMALL END (in)			NOM. SIZE (in)	NOM. DIA. (in)	MIN. WT. (lb/ft)
SINGLE GATE	DOUBLE GATE	NOM. DIA. (in)	MIN. WT. (lb/ft)	NUMBER	NOM. DIA. (in)	MIN. WT. (lb/ft)		Min.	Max.	Min. Avg.			
UP thru 6	UP thru 12	1	1.68	-	-	-	-	5	7	6	6x6	2½	5.79
7 thru 11	13 thru 22	1¼	2.27	1	1	1.68	1	5	7	6	6x6	3½	9.11
12 thru 16	23 thru 32	1½	2.72	2	1¼	2.27	2	7	9	8	8x8	6	18.97
17 thru 20	33 thru 40	2	3.65	2	1¼	2.27	2	9	11	10	10x10	6	18.97

* Max. taper 1" in 4'

① Gate posts on each side of a gate opening to be the same size. At a double gate installation with unequal width gates, size of both posts to be as indicated for single gate installation of the wider gate width.

② For length, setting and bracing details see end posts, Std. Drg. RD810.

GENERAL NOTES FOR ALL DETAILS:

1. Gates shown are for use with Fence Types 1, 1-5W and 2.
2. See Std. Drg. RD810 for details not shown.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 17-JAN-2012

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

FENCE GATES

2015

DATE	REVISION DESCRIPTION

rd820.dgn 14-JUL-2014

RD820

Effective Date: February 1, 2015 - May 31, 2015