

Feature	Sheet in Plans			
	Align- ment	General Constr.	Drainage/ Utilities	Constr. Profile
North Arrow	✓	✓	✓	✓
Begin / End Project Notations	✓	✓	✓	✓
Roadway construction centerlines	✓	✓	✓	
Centerline Stations	✓	✓	✓	
Station Equations	✓			
Right-of-way, access control, and easement lines	✓			
Centerline curve data and tangent bearings	✓			
Control Points	✓			
Construction Notes		✓		
New edge of pavement, curbs, medians, and sidewalks		✓		
New guardrail and flares		✓		
New mailboxes		✓		
New travel lanes, dimensions and tapers		✓		
New approaches and street/road connections and information		✓		
Stations and Elevations				✓
Subgrade and dimensions				✓
Profile grade and vertical alignment data				✓
Existing drainage pipes				✓
Existing ground line				✓
Earthwork Brackets				✓
Existing manholes and inlets				✓
New structures (bridges, box culverts)				✓
New drainage pipes			✓	✓
New manholes and inlets			✓	✓
Drainage Notes			✓	
Drainage removal			✓	
New and existing drainage and utilities features			✓	
New Utilities			✓	

Unit 13

Contract Plans





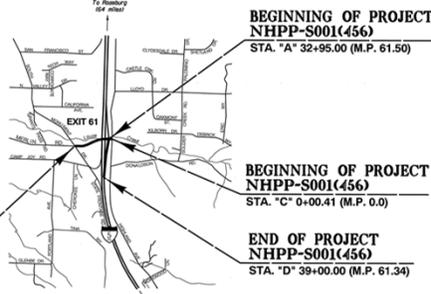
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1A	1. File Sheet
2A	Folder Of Sheets Civil, & Site, Grp. Res.

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED PROJECT
GRADING, PAVING, SIGNALS

I-5: EXIT 61 (LOUSE CREEK) INTERCHANGE IMPROVEMNTS

PACIFIC HIGHWAY
JOSEPHINE COUNTY
FEBRUARY 2015

14785 Contract Plans
48V-010





Overall length of Project = 0.2 Miles

ATTENTION:
Oregon Law Requires You to Follow Rules Adopted By the Oregon Statewide Enforcement Center. Please Refer to the Rules on the ODOT Website for the Rules by Going to the Center Website. The Reference Number for the Oregon Safety Center is 600-232-7843.

LET'S ALL WORK TOGETHER TO MAKE THIS JOB SAFE

OREGON TRANSPORTATION COMMISSION

Contract Author: ODOT
 Contract Designer: ODOT
 Contract Checker: ODOT
 Contract Engineer: ODOT
 Contract Inspector: ODOT
 Contract Inspector: ODOT

These plans were developed using ODOT design standards. Compliance to these standards, if any, have been indicated and approved by the ODOT Chief Engineer or their delegated authority.

Approving Authority: *[Signature]*
 Mark Thompson, Reg. 3 Tech. Civ. Eng.
 Print name and title
 ODOT Chief Engineer

1-5-EXIT 61 (LOUSE CREEK)
INTERCHANGE IMPROVEMENTS
PACIFIC HIGHWAY
JOSEPHINE COUNTY

DATE	REVISION	SHEET
02/22/2014	NHPP-S001(456)	1

1:200 - 001
1/172

Unit 13 Topics

- Standard layout of ODOT project plans
- Information on plan sheets
- Navigating and understanding Contract Plans



Standard Sheet Order

- Title Sheet
- Typical Sections
- Details
- Traffic Control
- Pipe Data
- Plans (General Construction) and Profile
- Erosion Control
- Bridge
- Traffic
- Standard Drawings

For additional details see the General Guidance section in the Study Guide.



Title Sheet: Sheet No. 1 (1/172)

14785 Contract Plans

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
 PLANS FOR PROPOSED PROJECT
GRADING, PAVING, SIGNALS
I-5: EXIT 61 (LOUSE CREEK)
INTERCHANGE IMPROVEMNTS
 PACIFIC HIGHWAY
 JOSEPHINE COUNTY
 FEBRUARY 2015

48V-010

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A	Index Of Sheets Cont. & Sit. Dwg. Ass.

BEGINNING OF PROJECT NHPP-S001(456)
STA. "A" 32+95.00 (M.P. 61.50)

BEGINNING OF PROJECT NHPP-S001(456)
STA. "C" 0+00.41 (M.P. 0.0)

END OF PROJECT NHPP-S001(456)
STA. "C" 14+06.79 (M.P. 0.3)

END OF PROJECT NHPP-S001(456)
STA. "D" 39+00.00 (M.P. 61.34)

Overall Length Of Project - 0.2 Miles

ATTENTION:
Oregon law requires that all plans, maps, specifications, etc., be filed with the Oregon State Engineer's Office, 1000 NE Oregon Street, Portland, Oregon 97232-3800. The fee for filing is \$10.00 per sheet. The Oregon State Engineer's Office will issue a Certificate of Filing upon payment of the fee and filing of the plans. The Oregon State Engineer's Office is located at 1000 NE Oregon Street, Portland, Oregon 97232-3800.

LET'S ALL WORK TOGETHER TO MAKE THIS JOB DATE

1. 35 S., R. 6 W., S.W.M.

51220 - 001
1/172

Continuation Sheet: Sheet No. 1A (2/172)

INDEX OF SHEETS, CONT.	
SHEET NO.	DESCRIPTION
1C	Survey Control Sheet
2	Plan, Sta. 1-3
3	Profile, Sta. 1-3
4	Plan, Sta. 4-6
5	Profile, Sta. 4-6
6	Plan, Sta. 7-9
7	Profile, Sta. 7-9
8	Plan, Sta. 10-12
9	Profile, Sta. 10-12
10	Plan, Sta. 13-15
11	Profile, Sta. 13-15
12	Plan, Sta. 16-18
13	Profile, Sta. 16-18
14	Plan, Sta. 19-21
15	Profile, Sta. 19-21
16	Plan, Sta. 22-24
17	Profile, Sta. 22-24
18	Plan, Sta. 25-27
19	Profile, Sta. 25-27
20	Plan, Sta. 28-30
21	Profile, Sta. 28-30
22	Plan, Sta. 31-33
23	Profile, Sta. 31-33
24	Plan, Sta. 34-36
25	Profile, Sta. 34-36
26	Plan, Sta. 37-39
27	Profile, Sta. 37-39
28	Plan, Sta. 40-42
29	Profile, Sta. 40-42
30	Plan, Sta. 43-45
31	Profile, Sta. 43-45
32	Plan, Sta. 46-48
33	Profile, Sta. 46-48
34	Plan, Sta. 49-51
35	Profile, Sta. 49-51
36	Plan, Sta. 52-54
37	Profile, Sta. 52-54
38	Plan, Sta. 55-57
39	Profile, Sta. 55-57
40	Plan, Sta. 58-60
41	Profile, Sta. 58-60
42	Plan, Sta. 61-63
43	Profile, Sta. 61-63
44	Plan, Sta. 64-66
45	Profile, Sta. 64-66
46	Plan, Sta. 67-69
47	Profile, Sta. 67-69
48	Plan, Sta. 70-72
49	Profile, Sta. 70-72
50	Plan, Sta. 73-75
51	Profile, Sta. 73-75
52	Plan, Sta. 76-78
53	Profile, Sta. 76-78
54	Plan, Sta. 79-81
55	Profile, Sta. 79-81
56	Plan, Sta. 82-84
57	Profile, Sta. 82-84
58	Plan, Sta. 85-87
59	Profile, Sta. 85-87
60	Plan, Sta. 88-90
61	Profile, Sta. 88-90
62	Plan, Sta. 91-93
63	Profile, Sta. 91-93
64	Plan, Sta. 94-96
65	Profile, Sta. 94-96
66	Plan, Sta. 97-99
67	Profile, Sta. 97-99
68	Plan, Sta. 100-102
69	Profile, Sta. 100-102
70	Plan, Sta. 103-105
71	Profile, Sta. 103-105
72	Plan, Sta. 106-108
73	Profile, Sta. 106-108
74	Plan, Sta. 109-111
75	Profile, Sta. 109-111
76	Plan, Sta. 112-114
77	Profile, Sta. 112-114
78	Plan, Sta. 115-117
79	Profile, Sta. 115-117
80	Plan, Sta. 118-120
81	Profile, Sta. 118-120
82	Plan, Sta. 121-123
83	Profile, Sta. 121-123
84	Plan, Sta. 124-126
85	Profile, Sta. 124-126
86	Plan, Sta. 127-129
87	Profile, Sta. 127-129
88	Plan, Sta. 130-132
89	Profile, Sta. 130-132
90	Plan, Sta. 133-135
91	Profile, Sta. 133-135
92	Plan, Sta. 136-138
93	Profile, Sta. 136-138
94	Plan, Sta. 139-141
95	Profile, Sta. 139-141
96	Plan, Sta. 142-144
97	Profile, Sta. 142-144
98	Plan, Sta. 145-147
99	Profile, Sta. 145-147
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101	Profile, Sta. 148-150
102	Plan, Sta. 151-153
103	Profile, Sta. 151-153
104	Plan, Sta. 154-156
105	Profile, Sta. 154-156
106	Plan, Sta. 157-159
107	Profile, Sta. 157-159
108	Plan, Sta. 160-162
109	Profile, Sta. 160-162
110	Plan, Sta. 163-165
111	Profile, Sta. 163-165
112	Plan, Sta. 166-168
113	Profile, Sta. 166-168
114	Plan, Sta. 169-171
115	Profile, Sta. 169-171
116	Plan, Sta. 172-174
117	Profile, Sta. 172-174
118	Plan, Sta. 175-177
119	Profile, Sta. 175-177
120	Plan, Sta. 178-180
121	Profile, Sta. 178-180
122	Plan, Sta. 181-183
123	Profile, Sta. 181-183
124	Plan, Sta. 184-186
125	Profile, Sta. 184-186
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128	Plan, Sta. 190-192
129	Profile, Sta. 190-192
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131	Profile, Sta. 193-195
132	Plan, Sta. 196-198
133	Profile, Sta. 196-198
134	Plan, Sta. 199-201
135	Profile, Sta. 199-201
136	Plan, Sta. 202-204
137	Profile, Sta. 202-204
138	Plan, Sta. 205-207
139	Profile, Sta. 205-207
140	Plan, Sta. 208-210
141	Profile, Sta. 208-210
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143	Profile, Sta. 211-213
144	Plan, Sta. 214-216
145	Profile, Sta. 214-216
146	Plan, Sta. 217-219
147	Profile, Sta. 217-219
148	Plan, Sta. 220-222
149	Profile, Sta. 220-222
150	Plan, Sta. 223-225
151	Profile, Sta. 223-225
152	Plan, Sta. 226-228
153	Profile, Sta. 226-228
154	Plan, Sta. 229-231
155	Profile, Sta. 229-231
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157	Profile, Sta. 232-234
158	Plan, Sta. 235-237
159	Profile, Sta. 235-237
160	Plan, Sta. 238-240
161	Profile, Sta. 238-240
162	Plan, Sta. 241-243
163	Profile, Sta. 241-243
164	Plan, Sta. 244-246
165	Profile, Sta. 244-246
166	Plan, Sta. 247-249
167	Profile, Sta. 247-249
168	Plan, Sta. 250-252
169	Profile, Sta. 250-252
170	Plan, Sta. 253-255
171	Profile, Sta. 253-255
172	Plan, Sta. 256-258
173	Profile, Sta. 256-258
174	Plan, Sta. 259-261
175	Profile, Sta. 259-261
176	Plan, Sta. 262-264
177	Profile, Sta. 262-264
178	Plan, Sta. 265-267
179	Profile, Sta. 265-267
180	Plan, Sta. 268-270
181	Profile, Sta. 268-270
182	Plan, Sta. 271-273
183	Profile, Sta. 271-273
184	Plan, Sta. 274-276
185	Profile, Sta. 274-276
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193	Profile, Sta. 286-288
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199	Profile, Sta. 295-297
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203	Profile, Sta. 301-303
204	Plan, Sta. 304-306
205	Profile, Sta. 304-306
206	Plan, Sta. 307-309
207	Profile, Sta. 307-309
208	Plan, Sta. 310-312
209	Profile, Sta. 310-312
210	Plan, Sta. 313-315
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213	Profile, Sta. 316-318
214	Plan, Sta. 319-321
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252	Plan, Sta. 376-378
253	Profile, Sta. 376-378
254	Plan, Sta. 379-381
255	Profile, Sta. 379-381
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265	Profile, Sta. 394-396
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268	Plan, Sta. 400-402
269	Profile, Sta. 400-402
270	Plan, Sta. 403-405
271	Profile, Sta. 403-405
272	Plan, Sta. 406-408
273	Profile, Sta. 406-408
274	Plan, Sta. 409-411
275	Profile, Sta. 409-411
276	Plan, Sta. 412-414
277	Profile, Sta. 412-414
278	Plan, Sta. 415-417
279	Profile, Sta. 415-417
280	Plan, Sta. 418-420
281	Profile, Sta. 418-420
282	Plan, Sta. 421-423
283	Profile, Sta. 421-423
284	Plan, Sta. 424-426
285	Profile, Sta. 424-426
286	Plan, Sta. 427-429
287	Profile, Sta. 427-429
288	Plan, Sta. 430-432
289	Profile, Sta. 430-432
290	Plan, Sta. 433-435
291	Profile, Sta. 433-435
292	Plan, Sta. 436-438
293	Profile, Sta. 436-438
294	Plan, Sta. 439-441
295	Profile, Sta. 439-441
296	Plan, Sta. 442-444
297	Profile, Sta. 442-444
298	Plan, Sta. 445-447
299	Profile, Sta. 445-447
300	Plan, Sta. 448-450
301	Profile, Sta. 448-450
302	Plan, Sta. 451-453
303	Profile, Sta. 451-453
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305	Profile, Sta. 454-456
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307	Profile, Sta. 457-459
308	Plan, Sta. 460-462
309	Profile, Sta. 460-462
310	Plan, Sta. 463-465
311	Profile, Sta. 463-465
312	Plan, Sta. 466-468
313	Profile, Sta. 466-468
314	Plan, Sta. 469-471
315	Profile, Sta. 469-471
316	Plan, Sta. 472-474
317	Profile, Sta. 472-474
318	Plan, Sta. 475-477
319	Profile, Sta. 475-477
320	Plan, Sta. 478-480
321	Profile, Sta. 478-480
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323	Profile, Sta. 481-483
324	Plan, Sta. 484-486
325	Profile, Sta. 484-486
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327	Profile, Sta. 487-489
328	Plan, Sta. 490-492
329	Profile, Sta. 490-492
330	Plan, Sta. 493-495
331	Profile, Sta. 493-495
332	Plan, Sta. 496-498
333	Profile, Sta. 496-498
334	Plan, Sta. 499-501
335	Profile, Sta. 499-501
336	Plan, Sta. 502-504
337	Profile, Sta. 502-504
338	Plan, Sta.

Alignment and Stationing

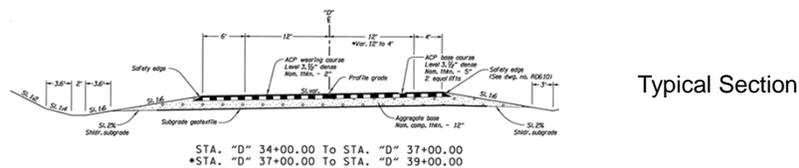
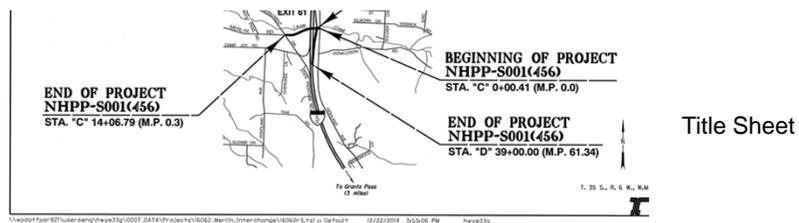
Method to the Madness (for most plan sets)

- Look at Title Sheet for alignment designations
- Look at Typical Sections for corresponding alignments
- Look at General Construction Plan and Profile Sheets to match roadways with alignments



Alignment and Stationing

Most Plans have the Alignments designated on the Title Sheet that correspond to the typical section alignments.



Stationing

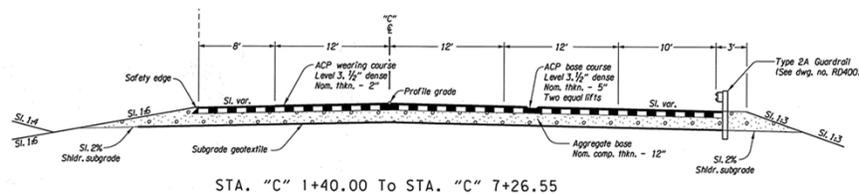
- How to read stations:
 - “Alignment designation “D” followed by beginning station number to ending station number
 - STA. “D” 34+00 to STA. “D” 39+00

- To find distance between any two stations:
 - Remove the “+” sign in the number and subtract the ending station from the beginning station
$$3900 - 3400 = 500 \text{ feet}$$



Question 13-1:

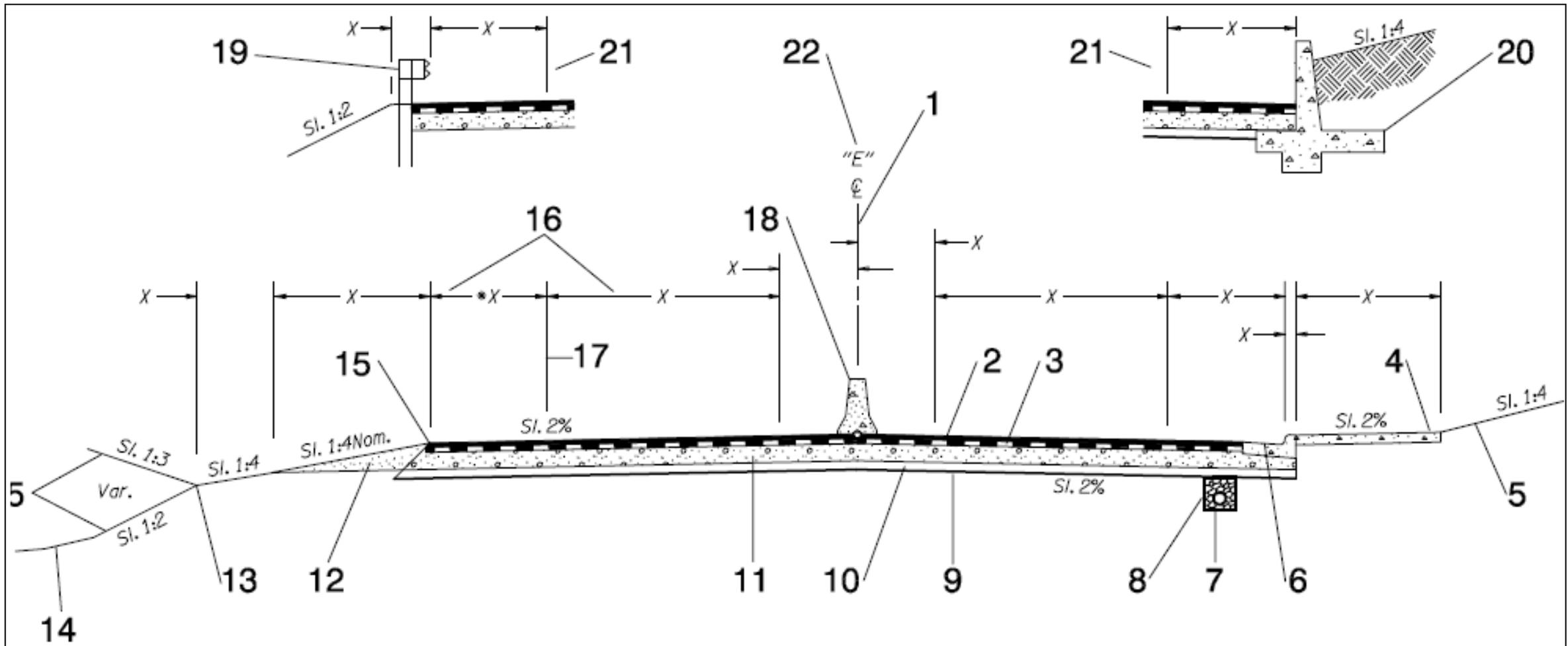
On sheet 5/172 of the plans, what is the distance between the two stations for the upper typical section shown?



Answer: 726.55 – 140 = 586.55 feet



Typical Section Components

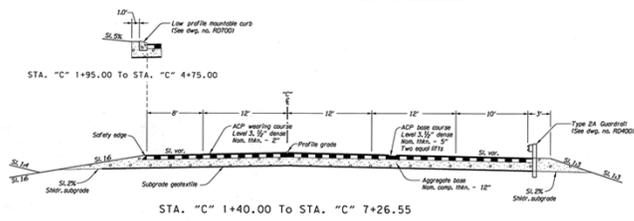


- | | | |
|----------------------|---------------------------------------|----------------------------|
| 1. Centerline | 9. Subgrade | 16. Dimension line |
| 2. Wearing course | 10. Subbase | 17. Extension line |
| 3. Base course | 11. Base | 18. Concrete barrier |
| 4. Sidewalk | 12. Rock shoulder | 19. Guardrail |
| 5. Cut or fill slope | 13. Ditch | 20. Concrete structure |
| 6. Curb | 14. Ground line | 21. Stack |
| 7. Subgrade drainage | 15. Multi-layer pavement construction | 22. Centerline designation |
| 8. Geotextile | | |

Typical Sections

Sheet 2A (5/172)

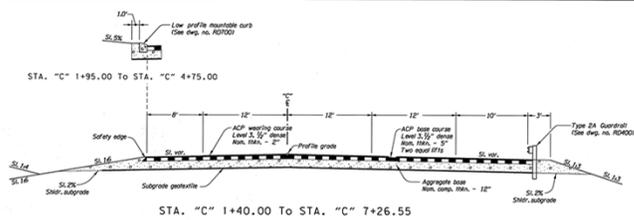
14785 Contract Plans
48V-010



Stacks (2A - 5/172)

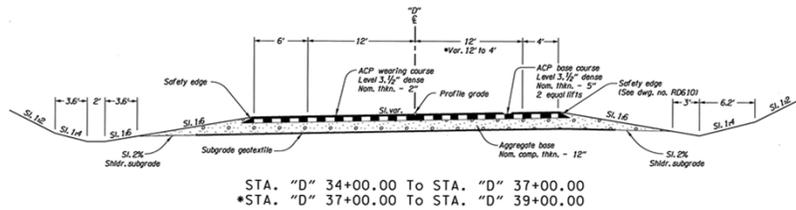
"C" 1+40.00 to "C" 7+26.55 has two typical sections on left side of roadway

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48V-010



Taper Sections

1. Match the asterisks between the stationing and the designated width
2. Read from left to right (left most station applies to the left number; right most station applies to the right number)



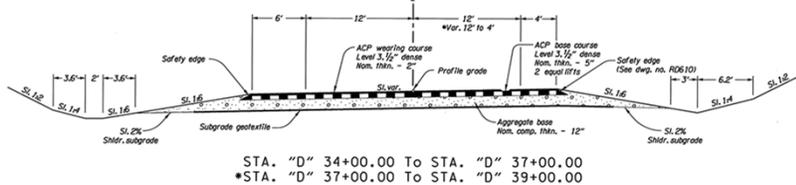
No asterisk

One asterisk

Sheet 2A-2 (6/172)

Taper Sections

Sheet 2A-2 (6/172)



STA. "D" 34+00 to STA. "D" 37+00 – Read these from left to right

To determine width of Roadway at "D" 34+00, start on left side and read to right side.

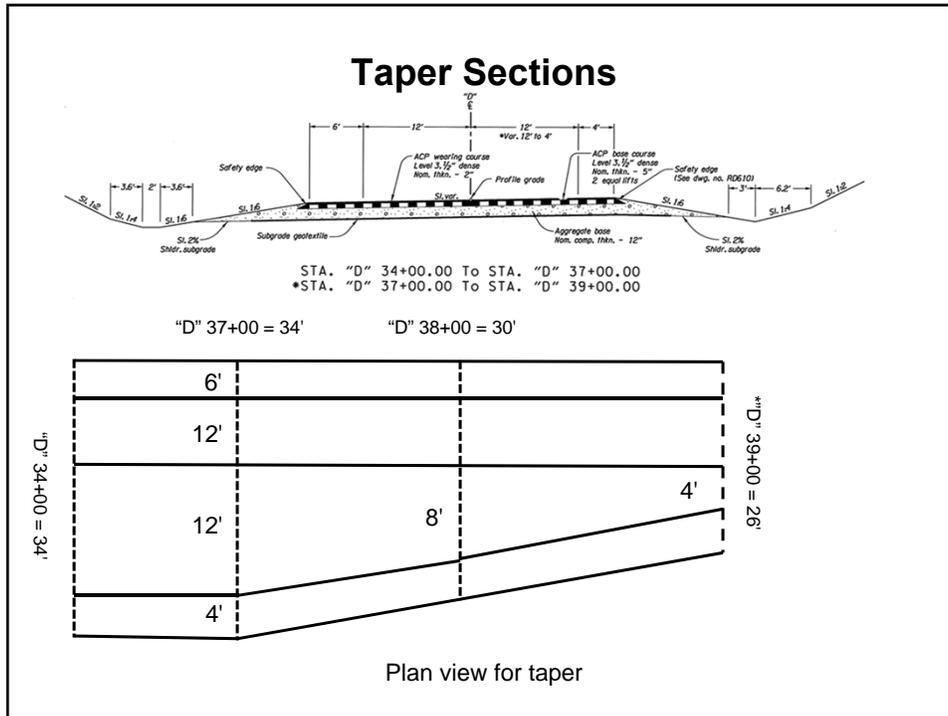
6'+12'+12'+4' = 34'

Now determine width of Roadway at *"D" 38+00

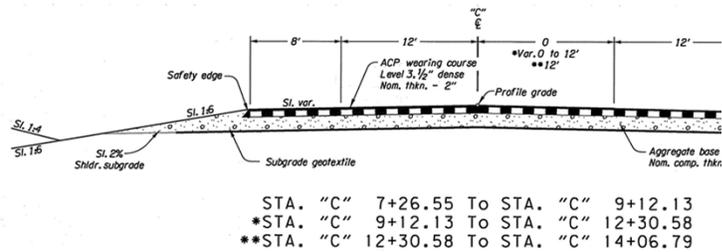
6'+12'+(12+4) / 2 = 8) + 4' = 30'

Now determine width of Roadway at *"D" 39+00.

6'+12'+4'+ 4' = 26'



Question 13-2: On sheet 5/172 of the plans, what is the width of the tapered section (not the entire roadway) immediately to the right of centerline at station "C" 12+30.58?



Answer:

Typical Section Review



13-3. What is the width of new ACP left of the saw cut to face of guardrail at STA. "H" 2 + 50?

13-4. What is the thickness of the aggregate base at STA. "UT" 1 + 50?

13-5. What is the thickness of ACP wearing course at STA. "D" 36 + 70?

13-6. What is the total thickness of the new ACP from saw cut line to existing ground at STA. "C" 1 + 00?



Detail Sheets

- Sheets No. 2B thru 2B-5
- Project Specific Detail Drawings
- Modified from Standard Details



Detail Sheets

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48V-010

12" SUBGRADE STABILIZATION
(As noted by the Engineer)

GEOTEXTILE INSTALLATION

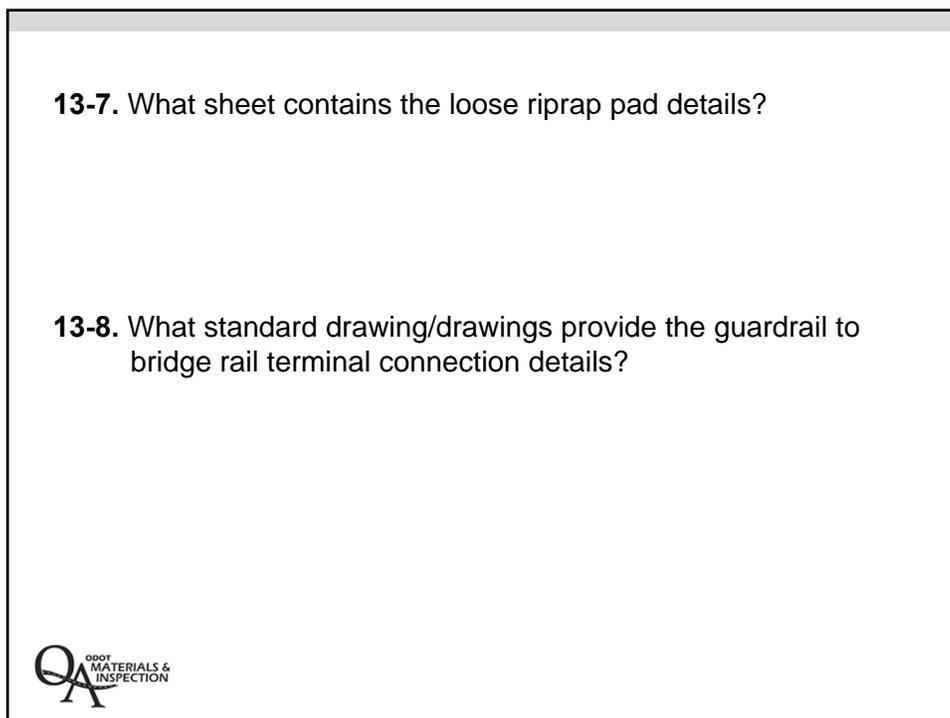
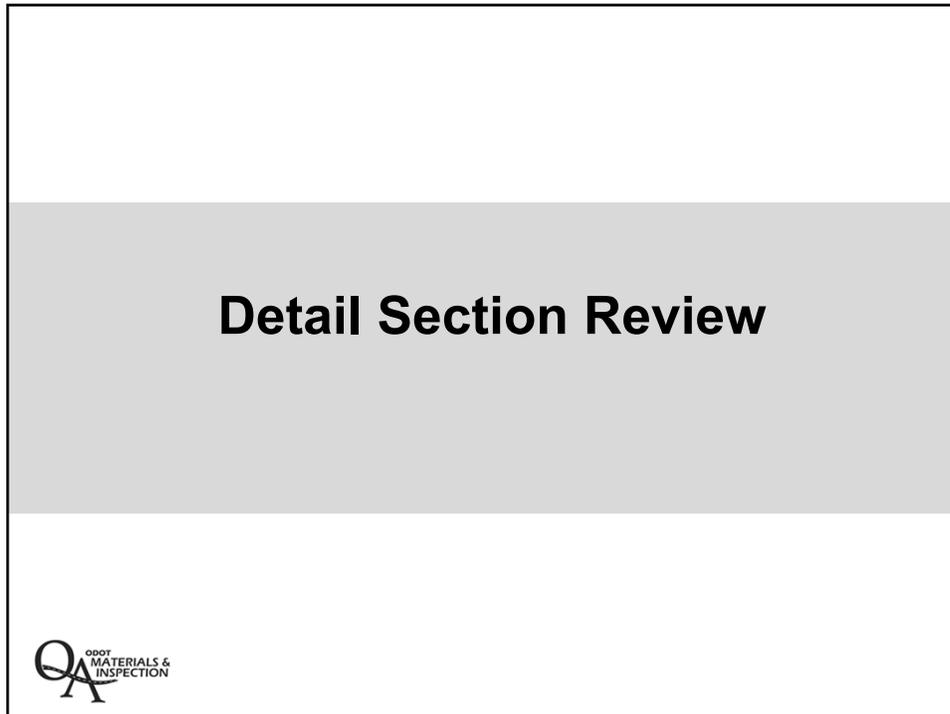
Notes:

1. For ACP wearing course, base course & aggregate base materials, thickness = see typical sections.
2. The 12" subgrade stabilization may be omitted if no soft or unstable subgrade is found during construction.
3. Embeds to a depth of 12" into subgrade.
4. Finish with 12" of stone embankment prior to placement of aggregate base.

OREGON DEPARTMENT OF TRANSPORTATION	
REGION 3 - TECHNICAL CENTER	
1-6 EXIT #1 (BLISSIE CREEK) INTERCHANGE IMPROVEMENTS	
PACIFIC HIGHWAY	
JUNCTION, OREGON	
Design Team Leader - Terry Deener	Scale: 1"=10'
Reviewed By - Paul Bremer	Sheet No. 2B
Checked By - Andy Martin	2B
DETAILS	8/172

I:\0007-DATA\Projects\14062-Merritt_Joiner\change\1002.dwg as Default 1/3/2015 10:49:30 PM hxy33g

Sheet 2B (8/172)



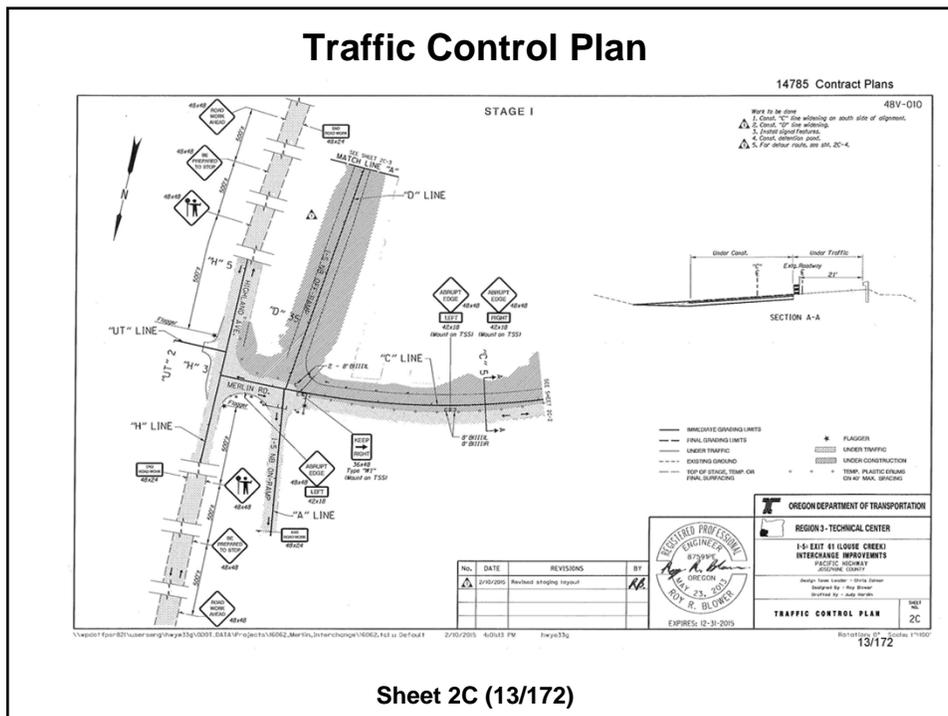
Traffic Control Plans

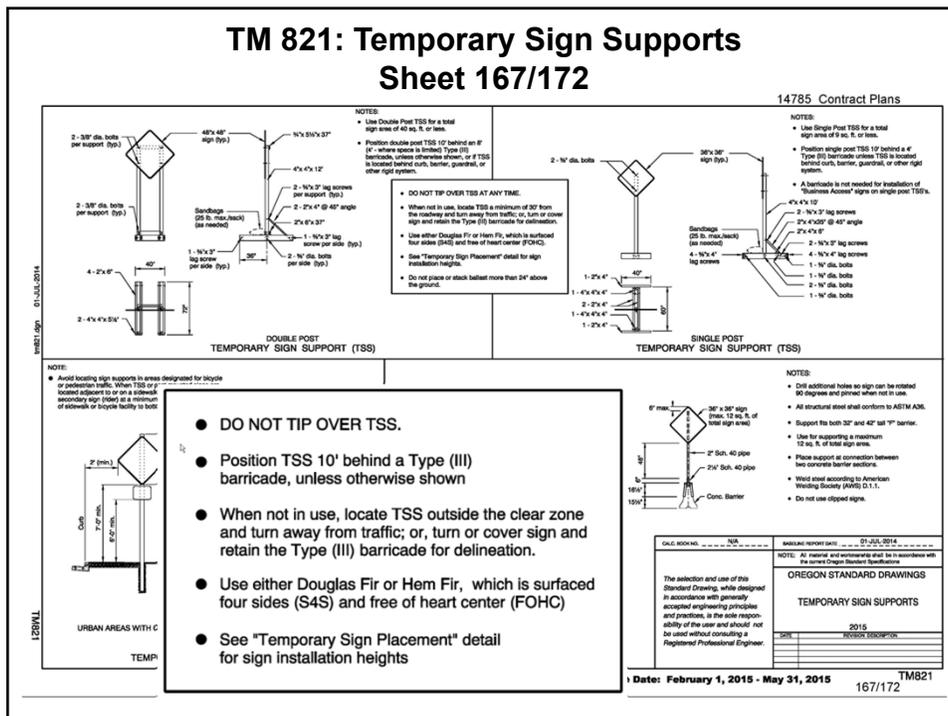
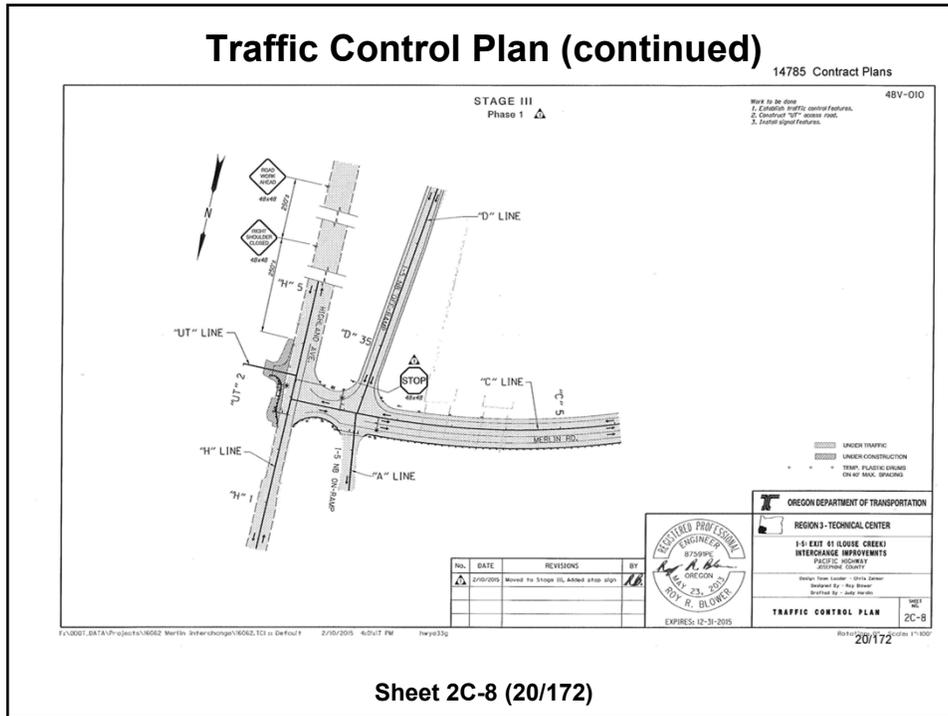
The four primary functions of a TCP are to provide:

- Efficient traffic flow
- Enhanced safety
- Minimized inconvenience
- Adequate mobility for all road users



Information on traffic control plan development can be found in the TCP Design Manual found at http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/pages/tcp_manual.aspx





TM 820: Temporary Barricades Sheet 166/172

14785 Contract Plans

BARRICADE RAIL LAYOUT

GENERAL NOTES FOR ALL DETAILS:

- All non-reflective surfaces shall be white.
- Barricades (approximately 25 ft each with easy) may be placed on lower forms to provide additional barrier.
- Barricades shall not extend above bottom rail or be suspended from barricade.
- For rails less than 30" long, 4" wide stripes shall be used.
- Rails must be 4" min. to 12" max. in height.
- Use barricades from ODOT Qualified Products List (QPL).
- Use 4" Type III barricades where horizontal space is limited.
- Do not block bike lanes or shoulders used by bicycles unless facility is properly closed and signed.
- Do not place barricades in sidewalks unless sidewalk is closed and signed according to the TSP. See Dep. No. TM 844.

NOTES:

- Markings for barricade rails shall slope downward at an angle of 45° in the direction traffic is to pass.
- Where a barricade extends entirely across a roadway, it is desirable that the stripes slope downward in the direction toward which traffic must turn in detouring.
- Where both right and left turns are provided for, slope the stripes striking downward in both directions from the center of the barricade.
- For full roadway closures, the C or LR barricade may be used. Closed barricades completely across roadway unless access is required for local road users.

DIAGRAM FOR BARRICADE PLACEMENT AND SLOPE MARKING

BARRICADE NOTATION

DATE: 01-JUL-2014	REVISION: NA	ISSUED BY: JLD
<p><small>NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.</small></p> <p style="text-align: center;">OREGON STANDARD DRAWINGS</p> <p style="text-align: center;">TEMPORARY BARRICADES</p>		
2015		
DATE	BY	REVISION

Effective Date: February 1, 2015 - May 31, 2015 TM820
166/172

Traffic Control Plans Review

- 13-9. How many “End Road Work” signs are on the project?

- 13-10. During Stage II at station “D” 44+10 the “Exit Open” sign should be posted on what type of mount?

- 13-11. What are the dimensions of the Stage 1 Detour “End Detour” sign for the I-5 Northbound Off Ramp @ Merlin Road?



Case Study



Appurtenances and Remarks

Number of Manholes
(by type)

Number of Inlets
(by type)

Pipe Extension Length (by side)

Existing Pipe Material

Any Special Remarks

DIAMETER OF LARGEST PIPE IN BASE (In.)	MANHOLES				INLETS			EXTENSION		REMARKS	
	PRECAST	CONC.	DROPP MANHOLE	SPECIAL	TYPE			LEFT	RIGHT		EXTG. PIPE MATERIAL
					Type "P"	Type "C-2"	Type "P" Mod.				
18	✓	✓								St Manhole over existing sewer	
24	✓	✓								Pl Manhole over existing sewer	
					✓					Pl Remove and replace inlet lid	
						✓					
										Radius Pipe = 400 ft.	
18	✓	✓						29	Co	Manhole over existing sewer	
18										Radius Pipe = 500 ft.	

Pipe Data Sheet – General Notes

GENERAL NOTES:

1. A check (✓) indicates column heading applies.
2. A new pipe culvert installation shall be of like material throughout.
3. Extension of existing metal culverts may be of unlike metal or corrugations. For connecting details, see Standard Drg. No. RD326.
4. Dimensions shown are nominal.
5. All pipes shall conform to the AASHTO specification applicable for the type of material and the diameter of the pipe involved

FOOTNOTES:

- ① Design height of cover is the critical design height used to select pipe materials. The height of cover for any given run of pipe may vary. Design height of cover shall be measured to subgrade.
- ② Cross-sectional dimensions may vary with different materials. When galvanized iron or steel and aluminum are acceptable alternates use a separate line for each type of material.

- ③ Cross-sectional shape of pipe normal to longitudinal axis, prior to loading
A = Pipe - Arch
R = Round
E = Elliptical (5% nominal elongation)
- ④ Minimum allowable diameter for Class 1 nonreinforced concrete pipe is 15".
- ⑤ Abbreviations for protective coatings for metal pipe
PM = Polymeric, 1/4" thkn. coated both sides
PO = Polyethylene inside lining, polymeric, outside
U = Uncoated
CIM = Chevron industrial membrane
Ep = Epoxy coated
- ⑥ Abbreviations for existing pipe materials
AB = Asbestos cement
Al = Corrugated aluminum
Co = Concrete
Pl = Plastic
St = Corrugated steel
X = Other material, see remarks column

Pipe Data Sheet – Standard Drawing List

<input checked="" type="checkbox"/> RD300	Trench Backfill, Bedding, Pipe Zone And Multiple Installations	<input type="checkbox"/> RD346	Large Precast Manhole
<input checked="" type="checkbox"/> RD302	Street Cut	<input type="checkbox"/> RD348	Manhole With Inlet
<input type="checkbox"/> RD304	Arch Pipe Backfill/Compaction	<input type="checkbox"/> RD350	Sanitary Sewer Piped Inside Drop Connection for Manholes
<input type="checkbox"/> RD306	Concrete Encasement, Cradle, and Cap Details	<input type="checkbox"/> RD352	Outside Drop Manholes
<input type="checkbox"/> RD308	Bore Casing Detail	<input type="checkbox"/> RD354	Carry Through Manhole - Storm
<input type="checkbox"/> RD310	Shallow/Deep Trench Service Connection, Blocking and Markers	<input checked="" type="checkbox"/> RD356	Manhole Covers And Frames
<input type="checkbox"/> RD312	Subsurface Drain	<input type="checkbox"/> RD358	Manhole Slope Protectors
<input checked="" type="checkbox"/> RD316	Sloped Ends For Metal Pipe	<input type="checkbox"/> RD360	Manhole Frame Adjustment
<input checked="" type="checkbox"/> RD317	Culvert Embankment Protection	<input type="checkbox"/> RD362	Sanitary Cleanout
<input checked="" type="checkbox"/> RD318	Sloped Ends For Concrete Pipe	<input checked="" type="checkbox"/> RD364	Concrete Inlets Type G-1, G-2, G-2M, & G-2MA
<input checked="" type="checkbox"/> RD319	Miscellaneous Culvert Details	<input type="checkbox"/> RD365	Frames & Grates For Concrete Inlets
<input checked="" type="checkbox"/> RD320	Paved End Slope For Culverts 60" Maximum Pipe Size	<input type="checkbox"/> RD366	Concrete Inlets Type CG-1, CG-2 And Curb Inlet Channel
<input type="checkbox"/> RD321	Paved End Slope With Removable Safety Bar(s)	<input type="checkbox"/> RD368	Concrete Inlets Type M-E, M-O, B And B-SL
<input type="checkbox"/> RD322	Safety End Section For Metal Pipe	<input checked="" type="checkbox"/> RD370	Ditch Inlet Type D
<input type="checkbox"/> RD324	Safety End Section For Concrete, PVC, HDPE & Polypropylene Pipe	<input type="checkbox"/> RD371	Concrete Inlet Base Type CG-3
<input checked="" type="checkbox"/> RD326	Coupling Bands For Corrugated Metal Pipe Types A, B, D & E	<input type="checkbox"/> RD372	Concrete Inlet Top, Option 1 Type CG-3
<input checked="" type="checkbox"/> RD327	Coupling Bands For Corrugated Metal Pipe Types F, J & K	<input type="checkbox"/> RD373	Concrete Inlet Top, Option 2 Type CG-3
<input type="checkbox"/> RD328	Stotted C.M.P. Drain Details	<input type="checkbox"/> RD374	Area Drainage Basin Or Field Inlet
<input type="checkbox"/> RD330	Metal Pipe Slope Anchors	<input type="checkbox"/> RD376	Miscellaneous Drainage Structures Siphon Box, Inlet Cap & Inlet Adjustment
<input type="checkbox"/> RD332	Concrete Pipe Anchor Detail	<input checked="" type="checkbox"/> RD378	Type "3" Catch Basin, Frame and Grate
<input type="checkbox"/> RD334	Locator Post	<input checked="" type="checkbox"/> RD380	Fill Height Tables For Aluminum & Steel Corrugated Pipe
<input checked="" type="checkbox"/> RD335	Standard Storm Sewer Manhole	<input type="checkbox"/> RD382	Fill Height Tables For Aluminum & Steel Arch Pipe
<input checked="" type="checkbox"/> RD336	Standard Manhole Details	<input checked="" type="checkbox"/> RD384	Fill Height Tables For Aluminum & Steel Spiral Rib Pipe
<input checked="" type="checkbox"/> RD337	Manhole Safety Ladder	<input checked="" type="checkbox"/> RD386	Fill Height Table For Circular Concrete Pipe
<input type="checkbox"/> RD338	Standard Sanitary Sewer Manhole	<input checked="" type="checkbox"/> RD388	Fill Height Tables For PVC Pipe
<input type="checkbox"/> RD339	Pipe To Structure Connections	<input checked="" type="checkbox"/> RD390	Fill Height Table For Corrugated HDPE Pipe
<input type="checkbox"/> RD340	Storm Sewer Pollution Control Manhole	<input checked="" type="checkbox"/> RD391	Fill Height Table For Steel Reinforced HDPE Pipe
<input checked="" type="checkbox"/> RD342	Shallow Manholes	<input checked="" type="checkbox"/> RD393	Fill Height Tables For Polypropylene Pipe
<input type="checkbox"/> RD343	24" Manholes	<input checked="" type="checkbox"/> RD398	Culvert ID Marker
<input checked="" type="checkbox"/> RD344	Standard Manhole Base Section	<input type="checkbox"/> RD399	Stormwater Treatment and Storage Facility Field Markers
<input type="checkbox"/> RD345	Pipe To Manhole Connections		

Pipe Data Sheet Review



13-12. What is the total length of 18-inch culvert pipe?

13-13. What type of pipe material can be used for the pipe on sheet 4 note 8?

13-14. In our plan set, what does Standard Drawing RD 342 pertain to? Do we have this drawing in our plan set?

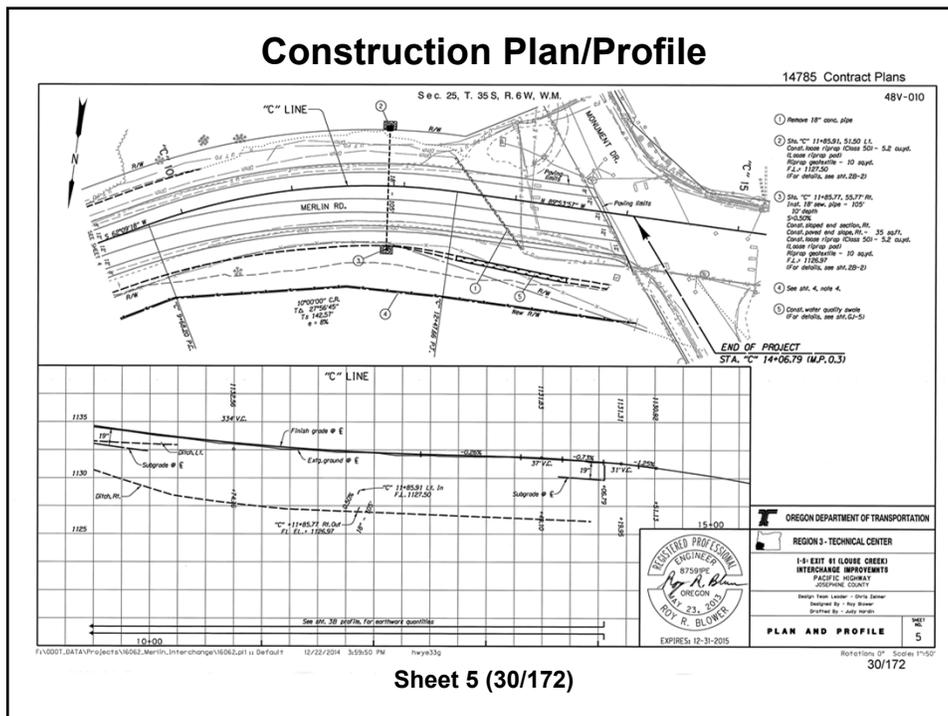
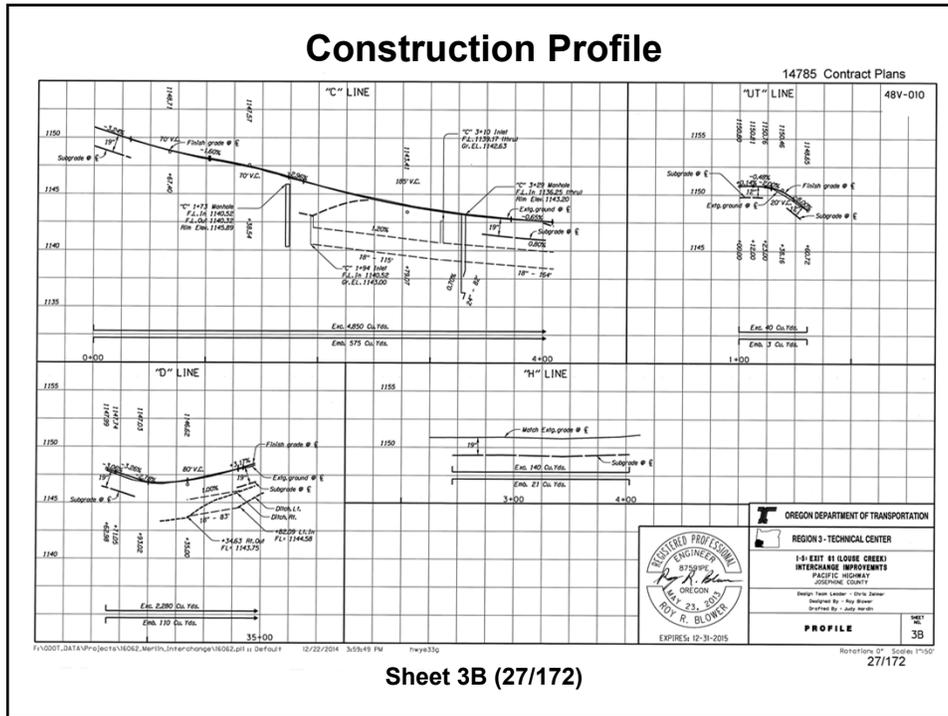


Plans and Profile

Roadway Construction Plans Sheets 3, 4, etc.

- Alignments
- General Construction
- General Construction Notes
- Drainage and Utilities
- Drainage Notes
- Construction Profiles





Plans and Profile Review



13-15. What feature is to be constructed at STA. "C" 8+19.59, 26.93' LT?

13-16. What is the estimated excavation quantity between STA. "H" 2+45 and "H" 4+03?

13-17. What is the approximate station for the northern most Paving Limit on Highland Avenue?

13-18. What is the grate elevation for the "G2-MA" inlet constructed at STA "C" 8+13, 34.47 LT?



Standard Specifications Related to Sign Installation

- 00905 – Removal & Reinstallation of Existing Signs
- 00910 – Wood Sign Posts
- 00920 – Sign Support Footings
- 00930 – Metal Sign Supports
- 00940 – Signs
- 00941 – Sign Covers



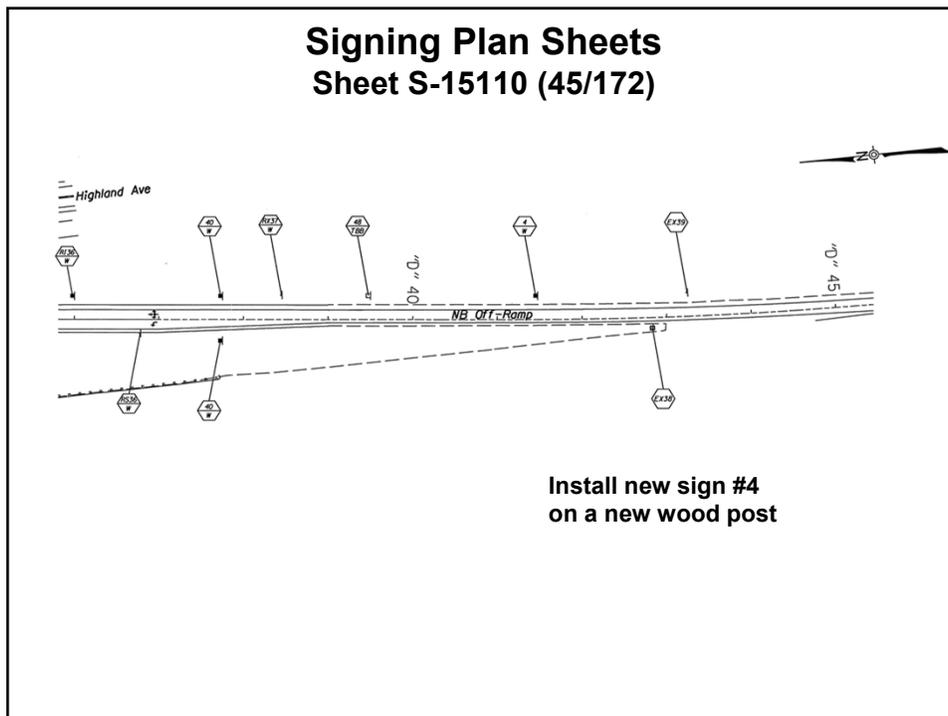
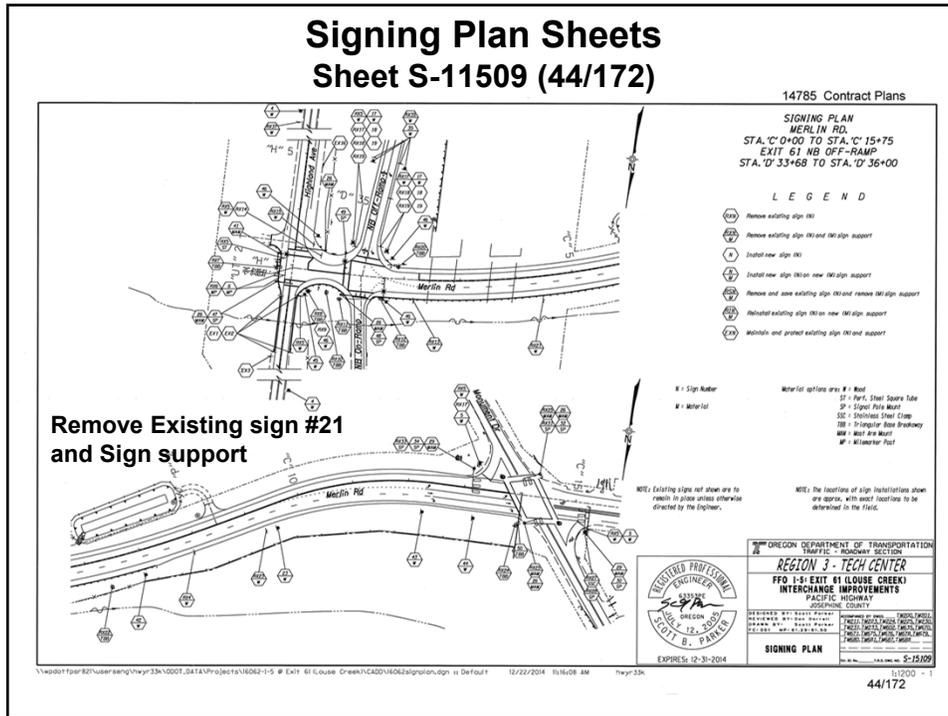
Signing

Common Bid Items

Unit of Measure

Remove Existing Signs	L.S.
Remove and Reinstall Existing Signs	L.S.
Wood Sign Posts	F.B.M.
Sign Support Footings	L.S.
Structure Mounts	L.S.
Multi-post Breakaway Sign Support	L.S.
Triangular Base Breakaway Sign Support	L.S.
Exit Number Sign Supports	L.S.
Square Tube Sign Supports	L.S.
Type “?” Signs in Place	Area
Modify Existing Signs	L.S.





Signing Plan Sheets – Sign and Post Data Table

14785 Contract Plans

SIGN NO.	SIGN LOCATION #	SIGN DIMENSIONS		BORDER WIDTH	RADIUS	ARROW INFO	SIGN TYPE	SUB-STRATE	COLOR 1/		LEGEND TYPE	SIGN #	TYPE OF SUPPORT	FOOTING	REFER TO OREGON STANDARD DRAWING	REMARKS
		WIDTH	HEIGHT						BACKGROUND	LEGEND						
4	N/A	36"	36"						R/G	BK						Sign to be installed along right-hand Ave
	D 41+45L	48"	48"						R/G	BK						Sign to be installed along right-hand Ave
5	C 13+21 L	36"	36"					R	SW							Mount Signs Back To Back
	C 15+25 R	36"	36"					R	SW							Mount Signs Back To Back
6	H 2+79 L	10"	18"					G	SW							
	H 2+79 L	10"	18"					G	SW							



4/
NOTE: THE LOCATIONS SHOWN ARE APPROXIMATE EXCEPT FOR SPEED ZONES, SCHOOL ZONES OBJECT MARKERS AND MILEPOST MARKERS. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER

Signing Plan Sheets – Sign and Post Data Table (Sheet 50/172)

SIGN NO.	SIGN LOCATION #	SIGN DIMENSIONS		BORDER WIDTH	RADIUS	ARROW INFO	SIGN TYPE	SUB-STRATE	COLOR 1/		LEGEND TYPE
		WIDTH	HEIGHT						BACKGROUND	LEGEND	
4	N/A	36"	36"						R/G	BK	
	N/A	36"	36"						R/G	BK	
	D 41+45L	48"	48"						R/G	BK	
5	C 13+21 L	36"	36"					R	SW		
	C 15+25 R	36"	36"					R	SW		
6	H 2+79 L	10"	18"					G	SW		
	H 2+79 L	10"	18"					G	SW		

Signing Plan Sheets

14785 Contract Plans

General Notes

1. Wood posts are available in the following commercial lengths: 12', 14', 16', 18', 20', 22', 24', 26'.
2. Refer to the Design for No. 1 and according to Section 02131.05.
3. For horizontal and vertical alignment of permanent signs refer to T-3000 and of temporary signs refer to T-3001.
4. Wood post design in accordance with the 5th Edition 2009 AASHTO Standard Specifications for Standard Systems for Highway Signs, Luminaires, and Traffic Signals.
5. Use the 3 second gust wind speeds shown on T-3011. For the 3/4" x 3/4" sign supports.
6. General design parameters are 14 x 0.025 SIF, 14.0 ft sign height, 1.5 ft sign width, and 5.0 ft sign depth.
7. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
8. Permanent signing uses an L = 0.21 for a recurrence interval of 10 years.
9. Temporary signing uses an L = 0.21 for a recurrence interval of 1.5 years.
10. Posts preferred to be buried or supported to not require field drilled holes.
11. * - x - posts should not be used in snow-affected areas.

Post Embedment Installation

1. Excavate the hole at least 12" larger in diameter than the diameter of the post in the direction of the post. Minimum of 6" of space around the edges of the post to accommodate expansion equipment.
2. Place the post in the hole to a vertical position.
3. Backfill around the post until the post is in contact with finished ground surface.
4. Backfill with selected general backfill meeting the requirements of 02130.11.
5. Place in layers not greater than 6 inches.
6. Solidify ram and tamp the layers into the excavation area around the post.
7. Compact during placement if the soil is compacted properly.
8. Repair and finish the surface around the post to match the surrounding surface.

PERMANENT WOOD POST TABLE

POST SIZE (IN)	14 x 14 x 2 1/2 IN. FT. 3						FIELD DRILLED HOLES FOR DIAMETER (IN)	POST EMBEDMENT DEPTH (IN)
	85 MPH		105 and 110 MPH		115-120 MPH			
	1	2	3*	4*	1	2	3*	4*
4" x 4"	77	154	231	308	385	462	539	616
4" x 6"	154	308	462	616	770	924	1078	1232
6" x 6"	231	462	693	924	1155	1386	1617	1848
6" x 8"	308	616	924	1232	1540	1848	2156	2464

TEMPORARY WOOD POST TABLE

POST SIZE (IN)	14 x 14 x 2 1/2 IN. FT. 3						FIELD DRILLED HOLES FOR DIAMETER (IN)	POST EMBEDMENT DEPTH (IN)
	85 MPH		105 and 110 MPH		115-120 MPH			
	1	2	3*	4*	1	2	3*	4*
4" x 4"	122	244	366	488	610	732	854	976
4" x 6"	244	488	732	976	1220	1464	1708	1952
6" x 6"	366	732	1098	1464	1830	2196	2562	2928
6" x 8"	488	976	1464	1952	2440	2928	3416	3904

Effective Date: February 1, 2015 - May 31, 2015

Signing Plan Sheets

14785 Contract Plans

SIGNING DETAILS

REGISTRATION INFORMATION

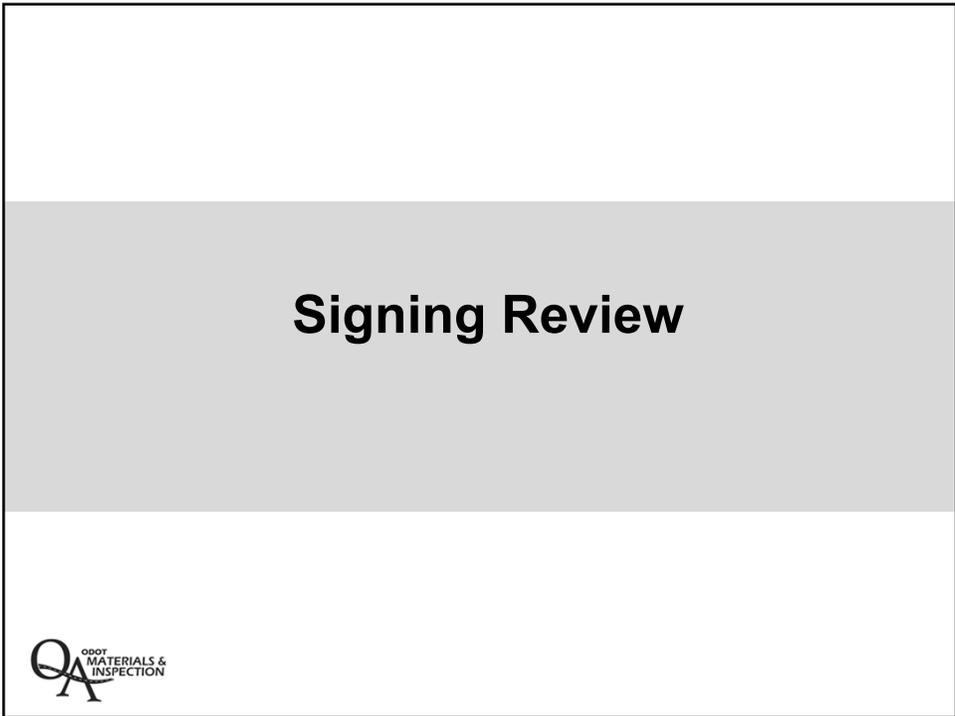
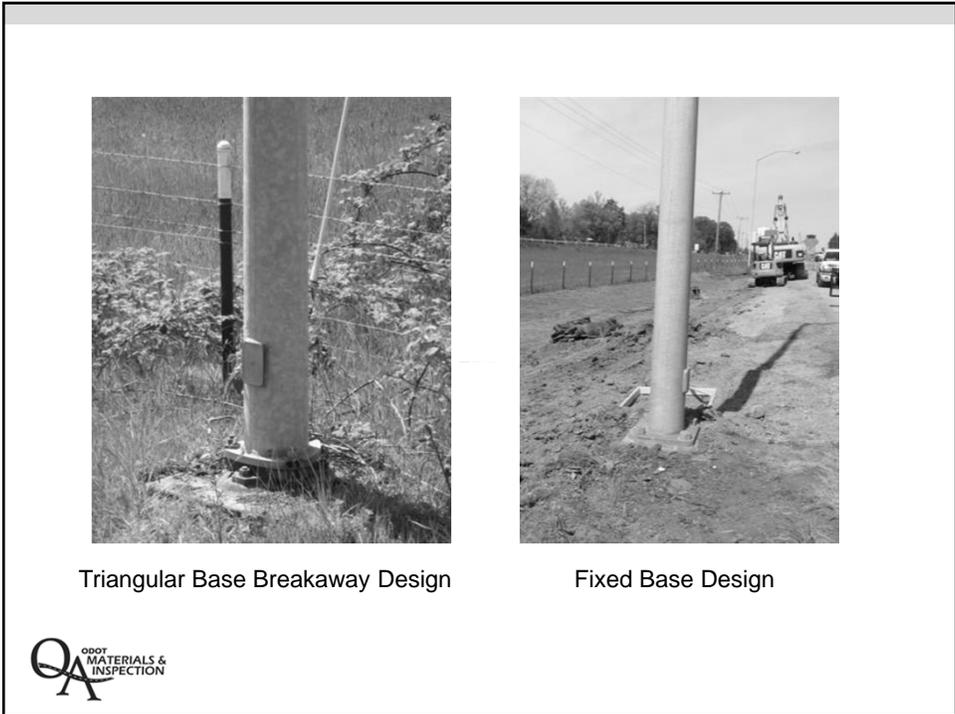
REGISTERED PROFESSIONAL ENGINEER
 63333
 S. J. PARKER
 J. B. PARKER
 EXP. 12-31-2014

SIGNING DETAILS

OREGON DEPARTMENT OF TRANSPORTATION
 TRAFFIC - REGIONAL OFFICE
 REGION 3 - TECH CENTER
 FFO 1-81 EXIT 61 LOUSE CREEK
 INTERCHANGE IMPROVEMENTS
 PROJECT NO. 14785
 JOSEPHINE COUNTY

1/20/2014 10:10:10 AM hxyr33n

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13-19. What sign number and sign is located at “D” 41+45 LT?

13-20. How many triangular base breakaway sign supports are on this project?

13-21. What is the required substrate for sign #23?

13-22. Sign #18 at “D” 34+22, should be installed *above* or *below* sign #17?



Class Exercises



Contract Plans 13-23

According to Contract 14785, how many feet and at what Station would the 24-inch storm pipe start?



Contract Plans 13-24

According to Contract 14785, what is the total amount of Cold Plane Pavement Removal between STA. "C" 0+92.60 to "C" 1+40.00?



Contract Plans 13-25

According to Contract 14785, what is the total number of 8' barricades to be installed during Stage II traffic control plans on 2C-5 through 2C-7?



Contract Plans 13-26

According to the permanent striping plan, for Contract 14785, what does a "W-2" designate?



