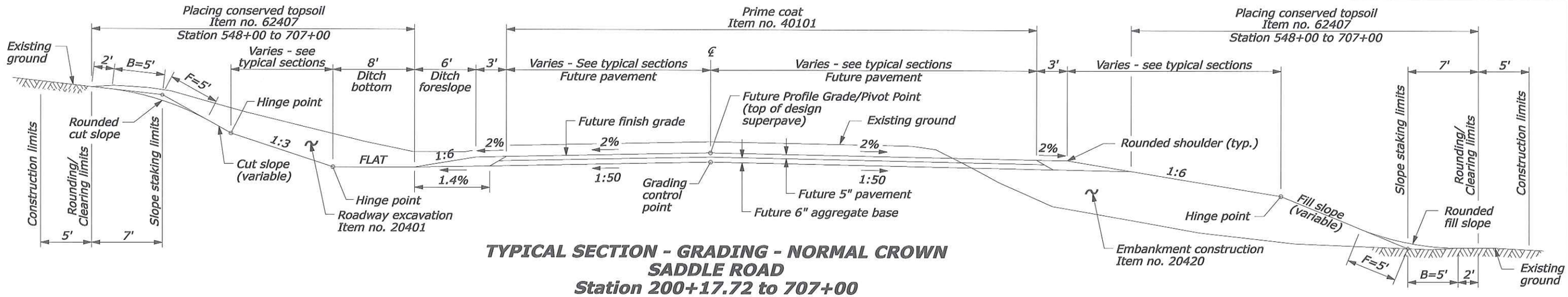
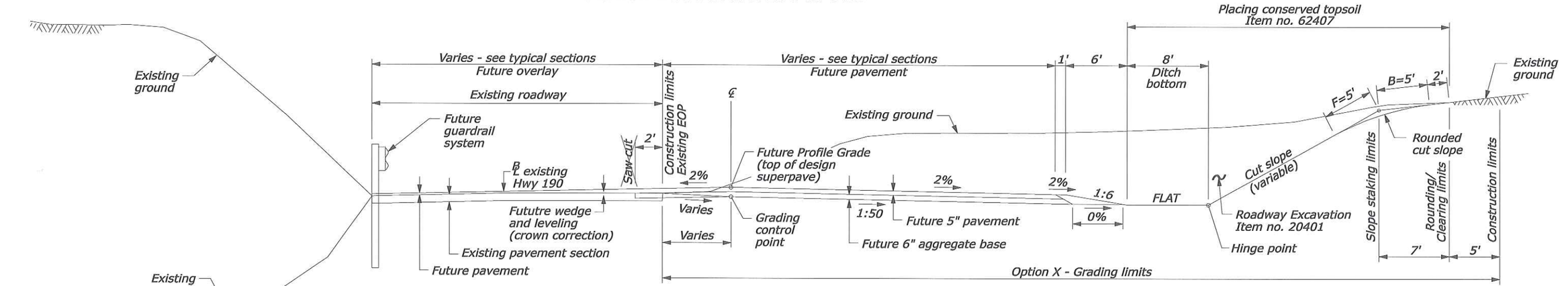
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A6	A18



TYPICAL SECTION - GRADING - NORMAL CROWN
SADDLE ROAD
Station 200+17.72 to 707+00



TYPICAL SECTION - GRADING - NORMAL CROWN
MAMALAHOA HWY (HWY 190)
Station 774+00 to 784+00

NOTE:

1. The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.
2. See slope ratio table for cut and fill slope ratios.
3. Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.
4. See section 204 of the SCR's for finished slope requirements.
5. See section 204 and 624 of the SCR's for the placement of topsoil.
6. See Typical Section Sheet 8 for "Roadway Embankment and Excavation" details.
7. See Typical Section Sheet 9 for "Topsoil Stockpile" location details.

LENGTH OF PROJECT

	Station to Station	Roadway (feet)	Roadway (miles)	Description
Option X (3.80 miles)	Saddle Road 200+17.72 to 391+00.00	19,082.28	3.61	
	MAMALAHOA HWY (HWY 190) 774+00.00 to 784+00.00	1,000.00	0.19	Option X Borrow Limits
Schedule B (5.99 miles)	Saddle Road 310+00.00 to 326+50.00	1,650.00	0.31	Borrow Limits
	335+50.00 to 366+00.00	3,050.00	0.58	Borrow Limits
	391+00.00 to 707+00.00	31,600.00	5.99	
	366+00.00 to 391+00.00	2,500.00	0.47	Construction Access Road
	326+50.00 to 335+50.00	900.00	0.17	Construction Access Road
[redacted] (3.86 miles)	Saddle Road [redacted]			Construction Access Road Borrow Limits

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FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

TYPICAL SECTIONS

SHEET 1 of 9

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STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A7	A18

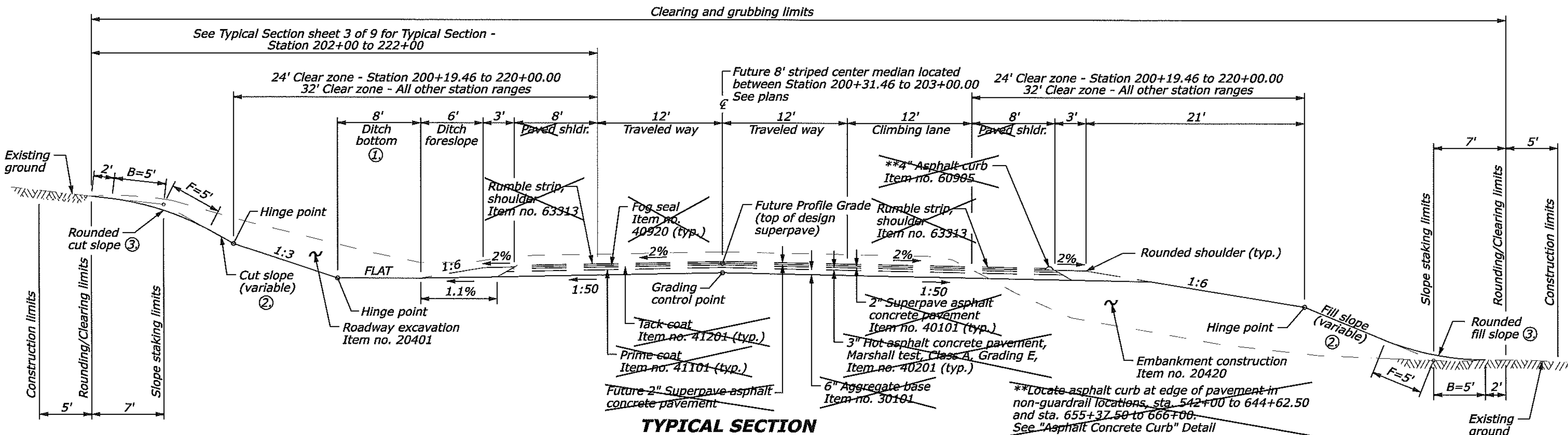
SLOPE RATIO TABLE

Slope	Cut Slope Ht.	Fill Slope Ht.
1:6	0' - 2'	0' - 1'
1:4	2' - 6'	1' - 4'
1:3	6' - 12'	4' - 8'
1:2	12' - 16'	8' - Over
1:1.5	16' - Over	N/A

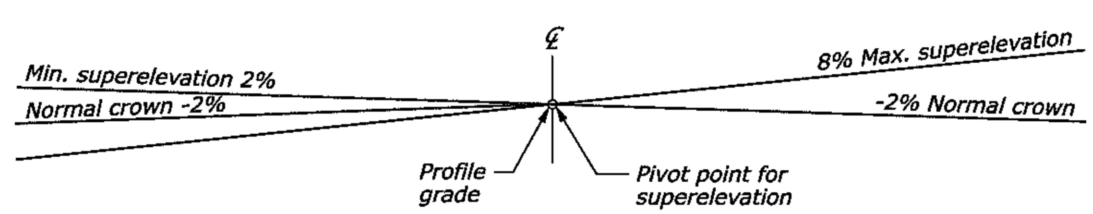
For cut slopes of 1:1.5, slope material is anticipated to be basalt rock or clinker materials.

NOTE:

1. The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.
2. See slope ratio table for cut and fill slope ratios.
3. Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.
4. ~~Place 3" hot asphalt concrete pavement, Marshall test in one lift. Place 2" Superpave asphalt concrete pavement in one lift.~~
5. ~~Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~
6. See section 204 of the SCR's for finished slope requirements.
7. See section 204 and 624 of the SCR's for the placement of topsoil.



TYPICAL SECTION
SADDLE ROAD
Station 200+17.72 to 645+00
Station 655+00 to 665+00



METHOD OF SUPERELEVATION ON CURVES

See plans for locations of curves and superelevations

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TYPICAL SECTIONS

SHEET 2 of 9

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A8	A18

NOTE:

① The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.

② See slope ratio table for cut and fill slope ratios.

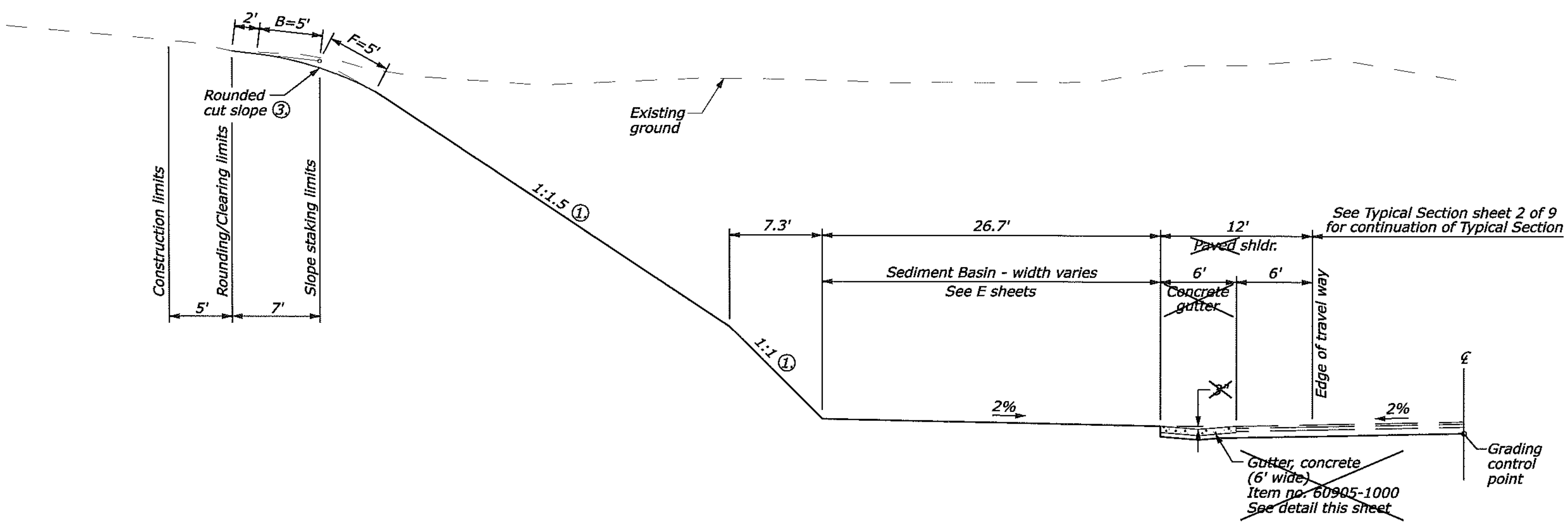
③ Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.

~~4. Place 3" hot asphalt concrete pavement, Marshall test in one lift. Place 2" Superpave asphalt concrete pavement in one lift.~~

~~5. Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~

6. See section 204 of the SCR's for finished slope requirements.

7. See section 204 and 624 of the SCR's for the placement of topsoil.



TYPICAL SECTION
SADDLE ROAD
Station 202+00 to 222+00

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TYPICAL SECTIONS

SHEET 3 of 9

$$$$DATE$$$$ $TIME$ $$$$DGN$$$

SLOPE RATIO TABLE

Slope	Cut Slope Ht.	Fill Slope Ht.
1:6	0' - 2'	0' - 1'
1:4	2' - 6'	1' - 4'
1:3	6' - 12'	4' - 8'
1:2	12' - 16'	8' - Over
1:1.5	16' - Over	N/A

For cut slopes of 1:1.5, slope material is anticipated to be basalt rock or clinker materials.

NOTE:

① The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.

② See slope ratio table for cut and fill slope ratios.

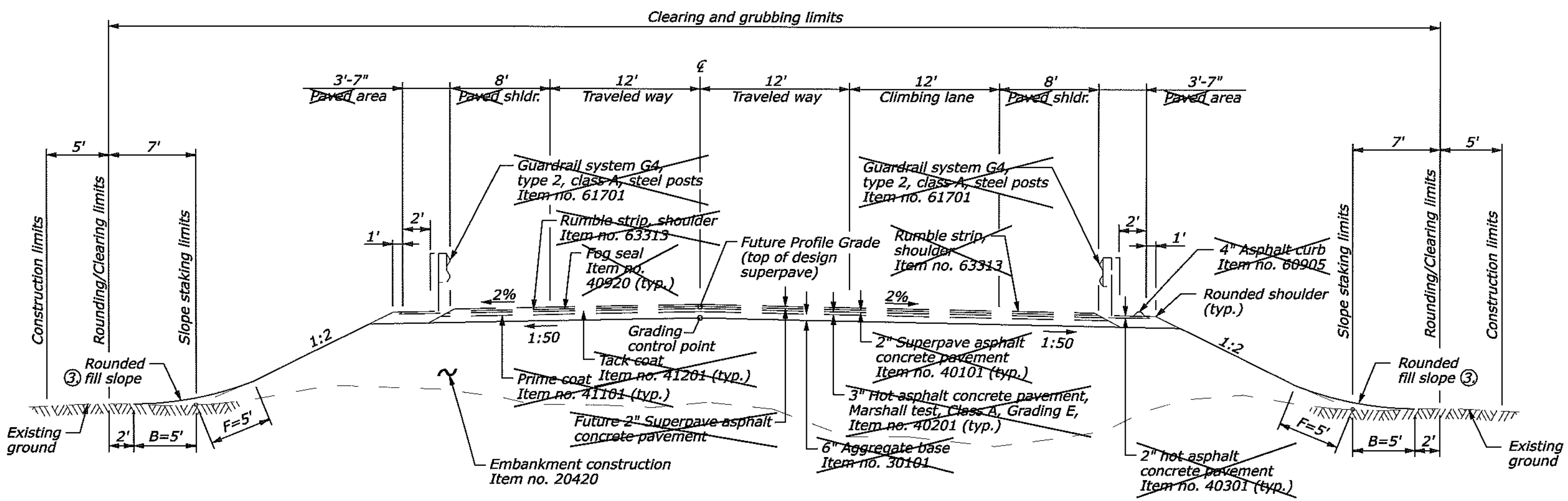
③ Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.

4. ~~Place 3" hot asphalt concrete pavement, Marshall test in one lift. Place 2" Superpave asphalt concrete pavement in one lift.~~

5. ~~Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~

6. See section 204 of the SCR's for finished slope requirements.

7. See section 204 and 624 of the SCR's for the placement of topsoil.



TYPICAL SECTION
SADDLE ROAD
Station 645+00 to 655+00

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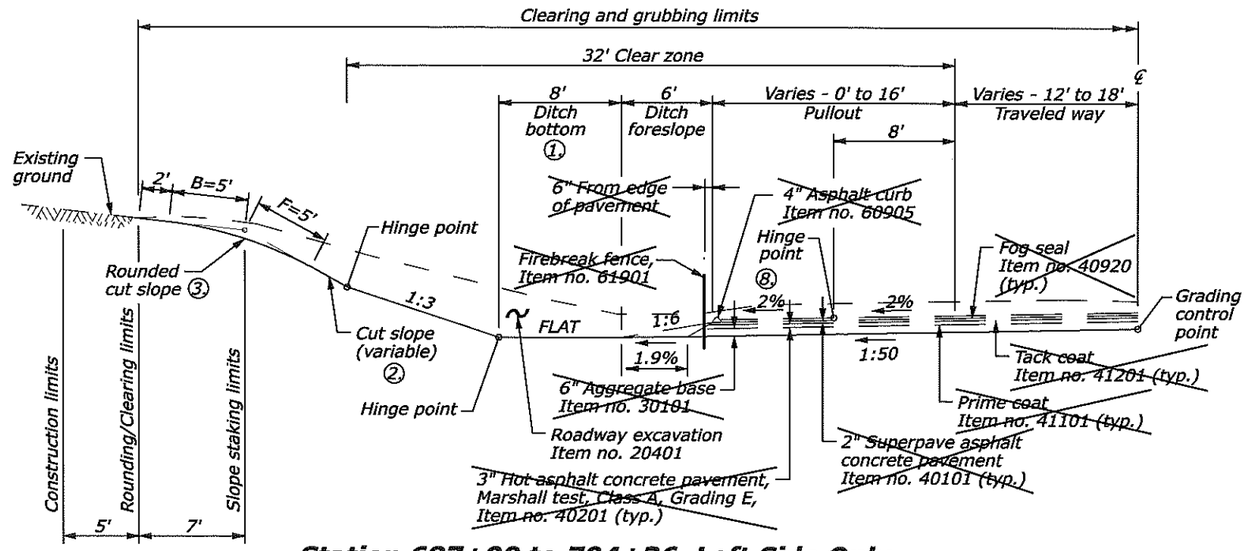
TYPICAL SECTIONS

$$$$DATE$$$$ $TIME$ $$$$DGN$$

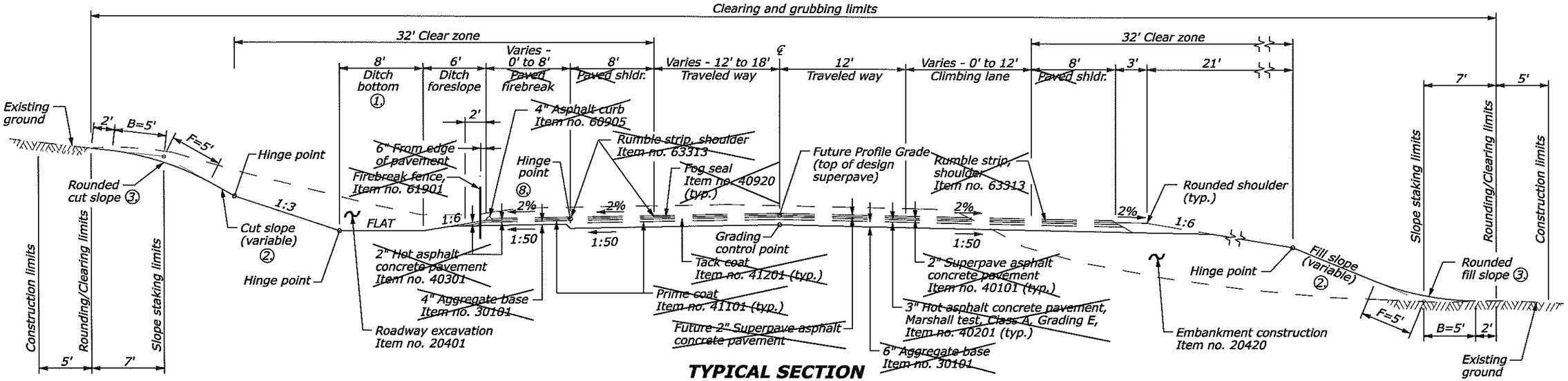
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A10	A18



Station 687+00 to 704+36, Left Side Only

NOTE:

1. The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.
2. See slope ratio table for cut and fill slope ratios.
3. Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.
4. ~~Place 3" hot asphalt concrete pavement, Marshall test in one lift.~~ Place 2" Superpave asphalt concrete pavement in one lift.
5. ~~Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~
6. See section 204 of the SCR's for finished slope requirements.
7. See section 204 and 624 of the SCR's for the placement of topsoil.
8. Maintain 2% cross-slope of paved firebreak with superelevated roadway location.



TYPICAL SECTION
SADDLE ROAD
Station 665+00 to 693+44.40

SLOPE RATIO TABLE

Slope	Cut Slope Ht.	Fill Slope Ht.
1:6	0' - 2'	0' - 1'
1:4	2' - 6'	1' - 4'
1:3	6' - 12'	4' - 8'
1:2	12' - 16'	8' - Over
1:1.5	16' - Over	N/A

For cut slopes of 1:1.5, slope material is anticipated to be basalt rock or clinker materials.

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CENTRAL FEDERAL LANDS HIGHWAY DIVISION

TYPICAL SECTIONS

SHEET 5 of 9

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SLOPE RATIO TABLE

Slope	Cut Slope Ht.	Fill Slope Ht.
1:6	0' - 2'	0' - 1'
1:4	2' - 6'	1' - 4'
1:3	6' - 12'	4' - 8'
1:2	12' - 16'	8' - Over
1:1.5	16' - Over	N/A

For cut slopes of 1:1.5, slope material is anticipated to be basalt rock or clinker materials.

NOTE:

① The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.

② See slope ratio table for cut and fill slope ratios.

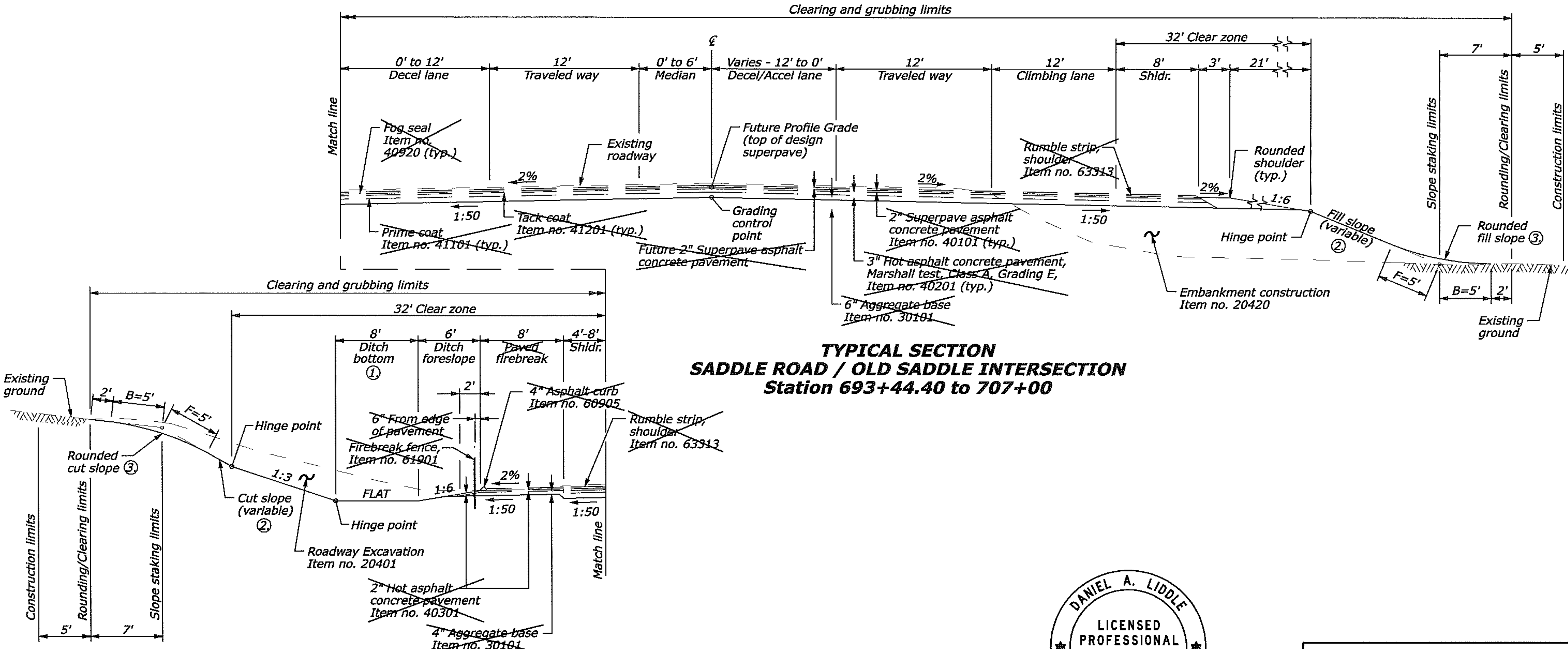
③ Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.

~~4. Place 3" hot asphalt concrete pavement, Marshall test in one lift. Place 2" Superpave asphalt concrete pavement in one lift.~~

~~5. Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~

6. See section 204 of the SCR's for finished slope requirements.

7. See section 204 and 624 of the SCR's for the placement of topsoil.



TYPICAL SECTION
SADDLE ROAD / OLD SADDLE INTERSECTION
Station 693+44.40 to 707+00

$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $TIME$ $$$$DATE$$$$

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TYPICAL SECTIONS

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A12	A18

SLOPE RATIO TABLE

Slope	Cut Slope Ht.	Fill Slope Ht.
1:6	0' - 2'	0' - 1'
1:4	2' - 6'	1' - 4'
1:3	6' - 12'	4' - 8'
1:2	12' - 16'	8' - Over
1:1.5	16' - Over	N/A

For cut slopes of 1:1.5, slope material is anticipated to be basalt rock or clinker materials.

NOTE:

① *The gradient and width of roadway ditches and the excavation and embankment slope ratios may be adjusted by the CO to assure adequate drainage and stability.*

② *See slope ratio table for cut and fill slope ratios.*

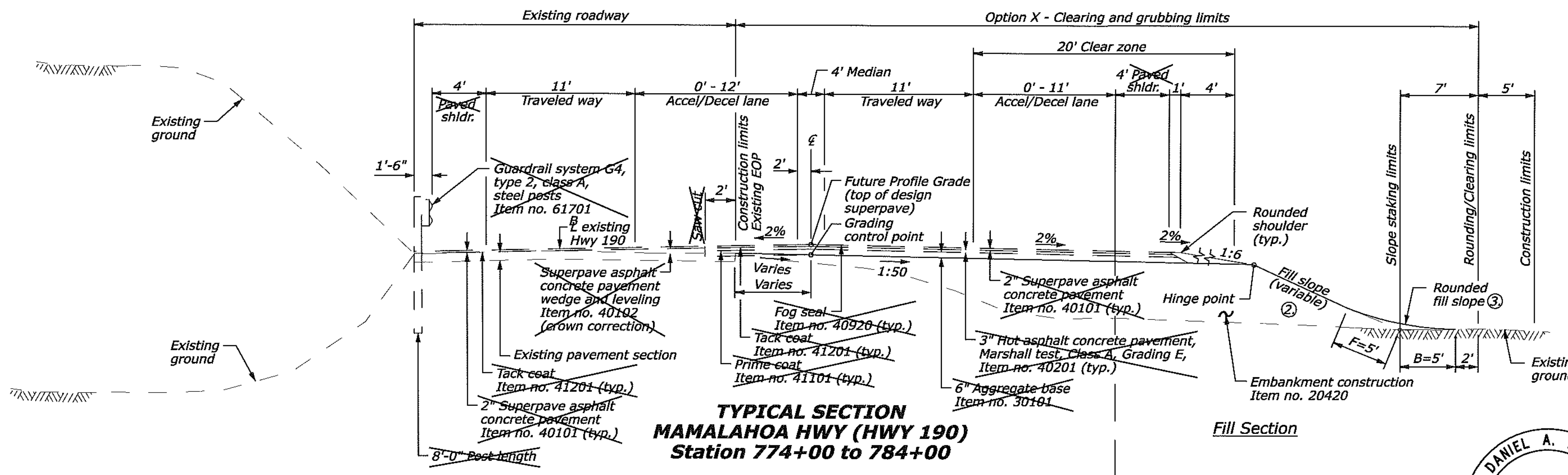
③ *Round all earth slopes and all rippable rock slopes. Reduce the B and F dimensions for cut slope distances less than 9 feet to the actual cut distance.*

~~4. Place 3" hot asphalt concrete pavement, Marshall test in one lift. Place 2" Superpave asphalt concrete pavement in one lift.~~

~~5. Apply fog seal to top of superpave asphalt concrete pavement finished surface and rumble strip.~~

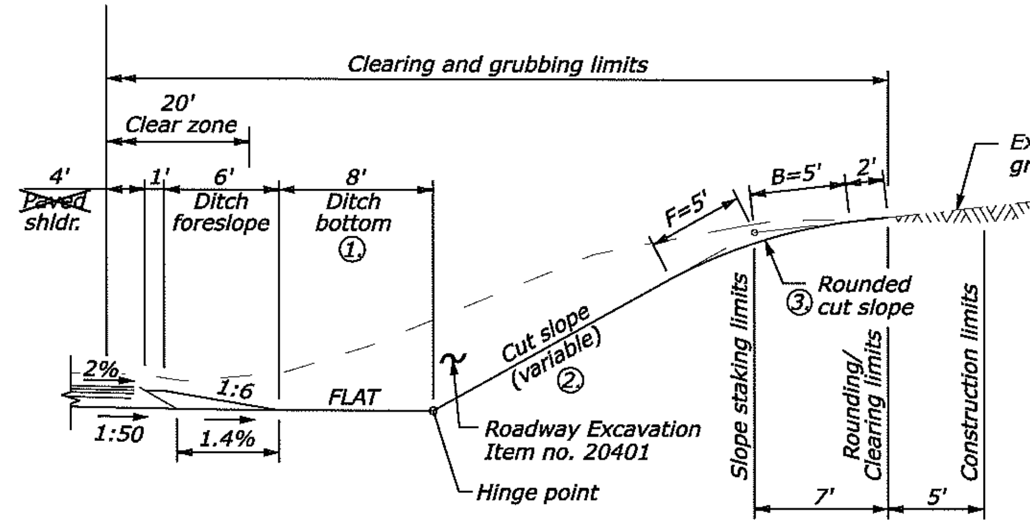
6. *See section 204 of the SCR's for finished slope requirements.*

7. *See section 204 and 624 of the SCR's for the placement of topsoil.*



TYPICAL SECTION
MAMALAHOA HWY (HWY 190)
Station 774+00 to 784+00

Fill Section



Cut Section

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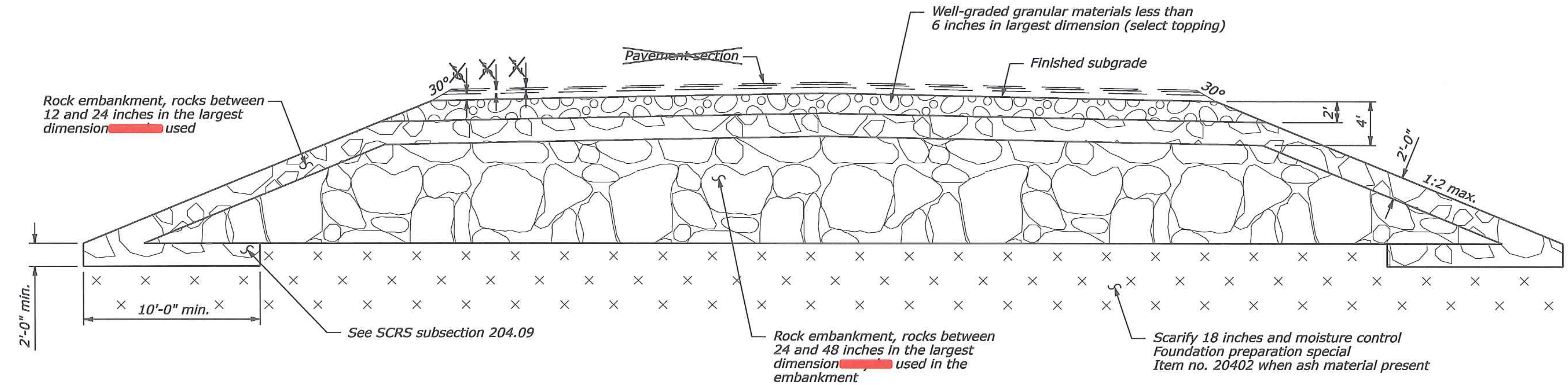
TYPICAL SECTIONS

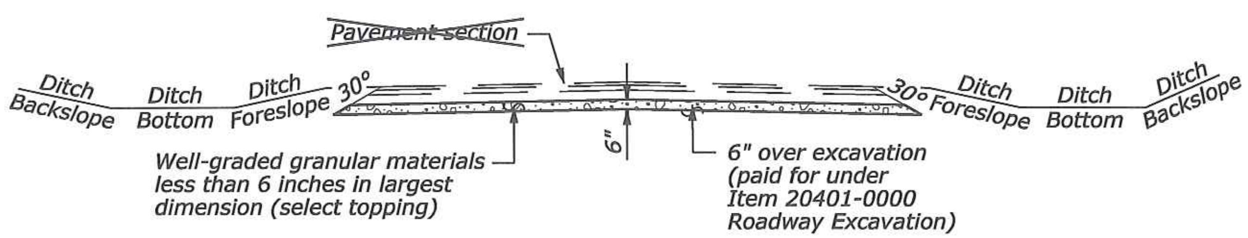
$$$$DGN$$ $TIME$ $$$$DATE$$$$

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(6)	A13	A18



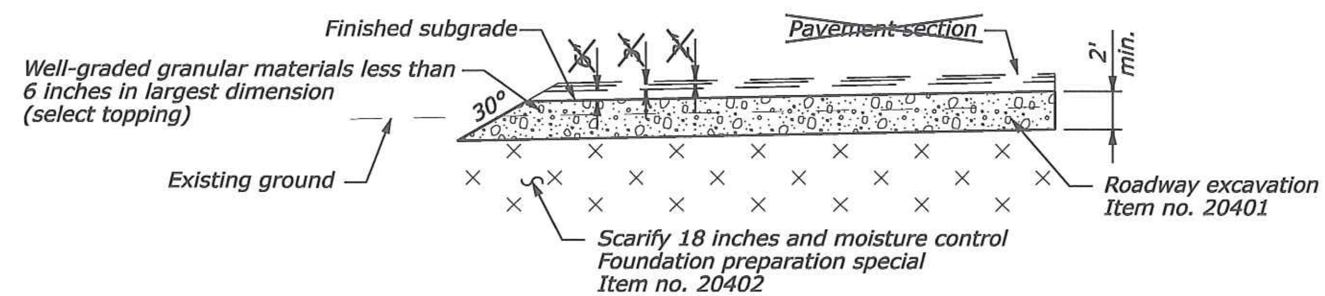
TYPICAL EMBANKMENT WITH ROCK DETAIL

This detail is schematic, refer to typical sections on sheets A6 - A11 for the geometric configurations of embankments. All rock embankment has been *measured as Embankment Construction Item no. 20420*



Over excavate 6" in all cut sections and backfill with well-graded granular material less than 6" in largest dimension (select topping).

TYPICAL CUT SECTION DETAIL



TYPICAL EMBANKMENT AND EXCAVATION IN ASH

In ash areas as directed by the CO excavate to 18 inches minimum depth below the aggregate base. Measured as excavation and embankment construction.

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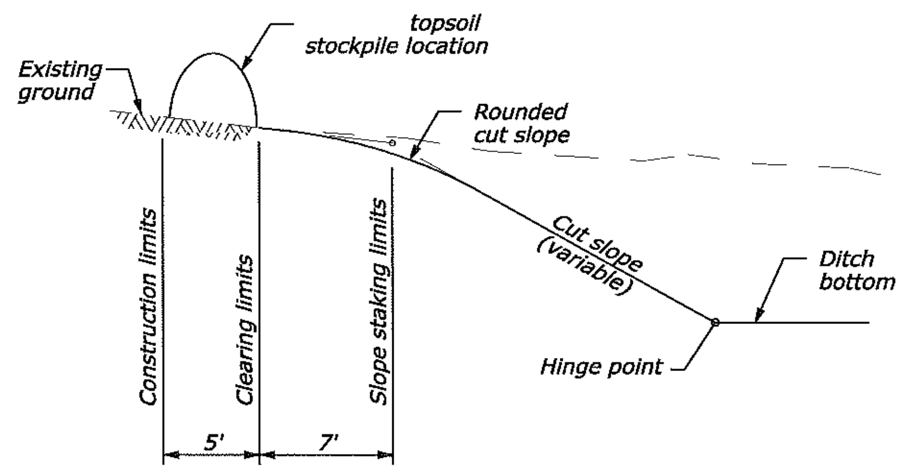
TYPICAL SECTIONS

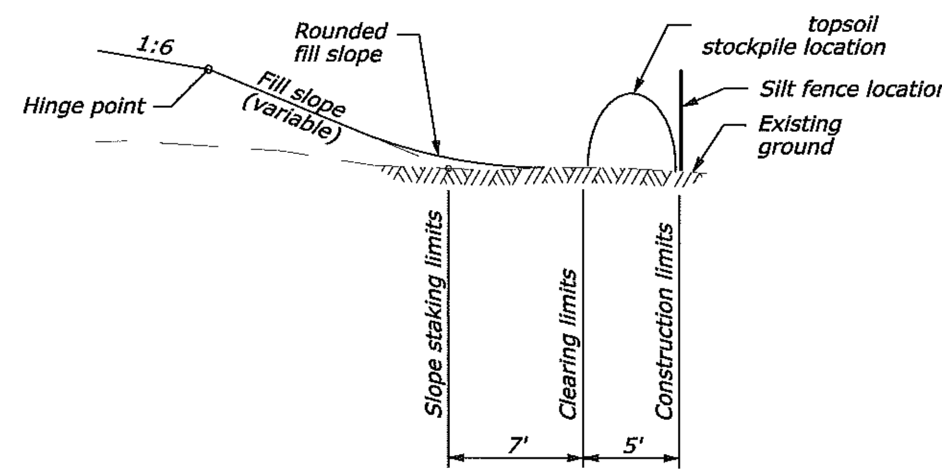
SHEET 8 of 9

$$$$DGN$$$

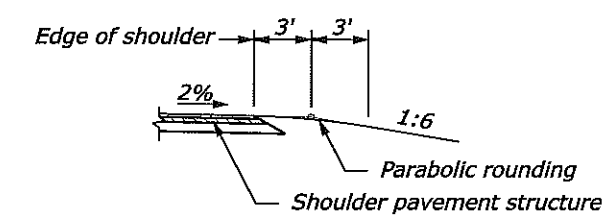
$$$$DATE$$$$ $TIME$



TOPSOIL STOCKPILE LOCATION IN CUT



TOPSOIL STOCKPILE LOCATION IN FILL



ROUNDED SHOULDER DETAIL

$$$$DATE$$$$ $TIME$ $$$$DGN$$

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TYPICAL SECTIONS