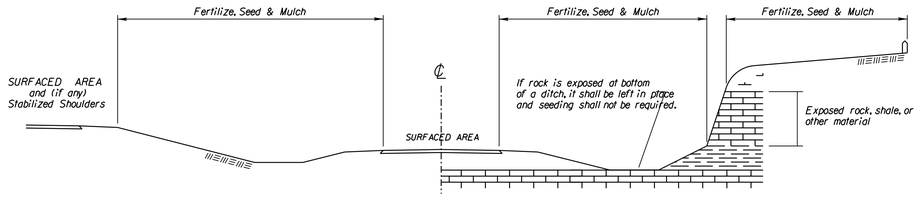
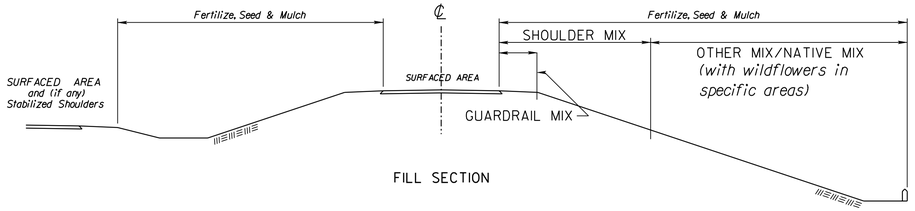
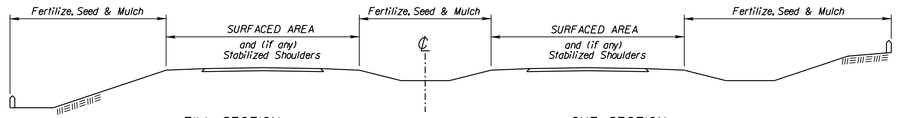
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-84702	2010	27	36



CUT SECTION



FILL SECTION



FILL SECTION CUT SECTION

TYPICAL SECTION -- DUAL PAVEMENT

SEEDING PERIODS

COOL SEASON	WARM SEASON
February 15 to April 20 and August 15 to Sept. 30	November 15 to June 1
SPECIES	SPECIES
Bluegrasses	Bluestems
Bromegrasses	Buffalograss
Canada Wildrye	Eastern Gamagrass
Fescues	Gramas
Ryegrasses	Indiangrass
Wheatgrasses	Lovegrasses
Reed Canarygrass	Switchgrass
	Wildflower Mixes

When "Cool Season" species are mixed with "Warm Season" species, in areas of 1 acre or more, the mixture shall be seeded during the "Warm Season". In areas of less than 1 acre, the mixture of "Cool Season" and "Warm Season" species may be seeded during the "Warm or Cool Seasons".

SODDING PERIODS

March 1 to April 15
and
September 1 to November 15

GENERAL: The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded, and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

All borrow areas shown on the plans are to be fertilized, seeded, and mulched. However, operation in borrow areas where crops are growing may be omitted when requested by the owner.

It shall not be required to till the area to bare ground prior to permanent seeding. If temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it may be necessary to regrade the area, resulting in bare ground.

FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Seeding Quantities will be acceptable.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching material is as follows:

1¾ - 2¼ Tons per Acre = 1½" loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

Other vegetative mulches (Acceptable only with the Engineer's concurrence).

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

The amount of mulch in the bid quantities is estimated. The total mulch required shall be determined in the field. The bid item for mulching shall be paid for by one of the following ways: A) Plan quantity as shown on Summary of Quantities, Seeding Sheet or Water Pollution Control Sheet, B) Slope measurement as measured in field, or C) Drill measurement less 5% as measured at the time of seeding.

NATIVE WILDFLOWER MIX 1

PLS RATE	NAME	QTY (lb)
0.1	Black Eyed Susan	
1.8	Illinois Bundleflower	
0.15	Maximilian Sunflower	
0.4	Purple Prairie Clover	
2.9	Showy Partridge Pea	
0.1	Upright Prairie Coneflower	
0.3	Butterfly Milkweed	
0.1	Stiff Goldenrod	
0.05	Pinnate Prairie Coneflower	
0.1	Lance-leaf Coreopsis	
0.05	New England Aster	
0.2	Pale Purple Coneflower	
0.05	Plains Coreopsis	
0.05	Hoary Verbena	
0.3	Roundhead Lespedeza	
0.4	Thickspike Gayfeather	
0.05	Wild Bergamot	
0.2	Smooth Oxeye	
0.05	Lemon Mint	
7.35	Total (lb)	

NATIVE WILDFLOWER MIX 2

PLS RATE	NAME	QTY (lb)
0.1	Black Eyed Susan	
1.8	Illinois Bundleflower	
0.15	Maximilian Sunflower	
0.4	Purple Prairie Clover	
2.9	Showy Partridge Pea	
0.1	Upright Prairie Coneflower	
0.3	Butterfly Milkweed	
0.4	Dotted Blazing Star	
0.4	Annual Gaillardia	
0.05	Stiff Goldenrod	
0.05	New England Aster	
0.3	Missouri Evening Primrose	
0.05	Plains Coreopsis	
0.15	White Prairie Clover	
0.3	Roundhead Lespedeza	
0.05	Lemon Mint	
0.15	Pitcher Sage	
7.65	Total (lb)	

NATIVE WILDFLOWER MIX 3

PLS RATE	NAME	QTY (lb)
0.15	Black Eyed Susan	
1.9	Illinois Bundleflower	
0.15	Maximilian Sunflower	
0.05	Western Yarrow	
0.5	Black Sampson Echinacea	
0.05	Upright Prairie Coneflower	
0.3	Butterfly Milkweed	
0.4	Dotted Blazing Star	
0.75	Annual Gaillardia	
0.05	Stiff Goldenrod	
0.05	New England Aster	
0.4	Pitcher Sage	
0.01	Plains Coreopsis	
0.15	White Prairie Clover	
0.2	Purple Prairie Clover	
0.4	Leadplant	
0.02	White Heath Aster	
1	Blue Wild Indigo	
0.05	Lemon Mint	
6.58	Total (lb)	

NATIVE WILDFLOWER MIX 4

PLS RATE	NAME	QTY (lb)
1.9	Illinois Bundleflower	
0.4	Maximilian Sunflower	
0.05	Western Yarrow	
1	Black Sampson Echinacea	
0.1	Upright Prairie Coneflower	
0.1	Scarlet Globemallow	
0.4	Dotted Blazing Star	
1.1	Annual Gaillardia (Firewheel)	
0.1	Hoary Vervain	
0.3	White Prairie Clover	
0.4	Purple Prairie Clover	
0.4	Perennial Gaillardia (Blanket Flower)	
0.02	White Heath Aster	
0.05	Lemon Mint	
6.32	Total (lb)	

Package and deliver the wildflower seed separately from the grass seed mix. Package and deliver the Tall Drop Seed separately from the grass seed and the wildflower mix. Place the grass seed (except Tall Drop Seed) in the large seed box and drill (cover) seed 1/8" - 1/4". Place the wildflower seed in a separate seed box and drill (cover) seed 1/16" maximum. Place the Tall Drop Seed in a separate (third) seed box and place the seed (using the seed drill) on the soil surface. OPTION: Broadcast Tall Drop Seed on the soil surface.

SUMMARY OF SEEDING QUANTITIES

P.L.S. RATE/ACRE SHLDR	P.L.S. RATE/ACRE OTHER	ACRES SHLDR	ACRES OTHER	BID ITEM	QUANTITY	UNIT
				SEEDING PERIOD Aug 15 through March 15		
	1.0			K-31 Fescues Seed	180	lb.
	1.0			Western Wheatgrass Seed	90	lb.
	1.0			Smooth Bromegrass Seed	90	lb.
*				Seeding	1	LS
**				Sodding	1	LS

NOTE:
All seeded areas to be covered with Excelsior (Curlex I) erosion control blanket or approved equal. Mulching will not be allowed. Contractor to water for 30 days. All material, equipment, and labor for this work sall be paid for under the bid item of "Seeding".

* *Channel Areas should be seeded.*
** *Sod shall be Bermuda or Buffalo.*

SHLDR = Shoulder Turf Mix: Includes a 30 foot wide strip along the stabilized shoulder on each side of each traveled way, plus all median areas less than 60 feet wide.

OTHER = All other turf areas except Shoulder, Guardrail, and Native areas usually include the Native Wildflower Mix.

GRDRL = Guardrail Mix: This mix does not need mowing. Plant it below the guardrail between the edge of pavement and the edge of the 10:1 slope, and on steep slopes or non-mowable slopes as shown on the drawings.

NATIVE = The Native Mix is a 40% wildflower, 60% native grass mix. See this sheet for the locations of this high wildflower content seed mix.

NO.	DATE	REVISIONS	BY	APP'D
4	10/13/08	Revised Standard	MRM	SHS
3	12/14/05	Revised Standard	MRM	SHS
2	6/16/05	Revised Standard	SHS	SHS
1	3/01/04	Revised Standard	FCM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

PERMANENT SEEDING
SUMMARY OF SEEDING QUANTITIES

~~EA850~~

F.H.W.A. APPROVAL		1/04/2006	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES	TRACED
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	TRACE CK.

Std. Base File: la850.dgn
Plotted By: -
Plot Location: $UNIT$
File: T:\3576BA\CADDSHEET\STANDARDS\3\STLA850.dgn
Plot Date: 4/28/2010