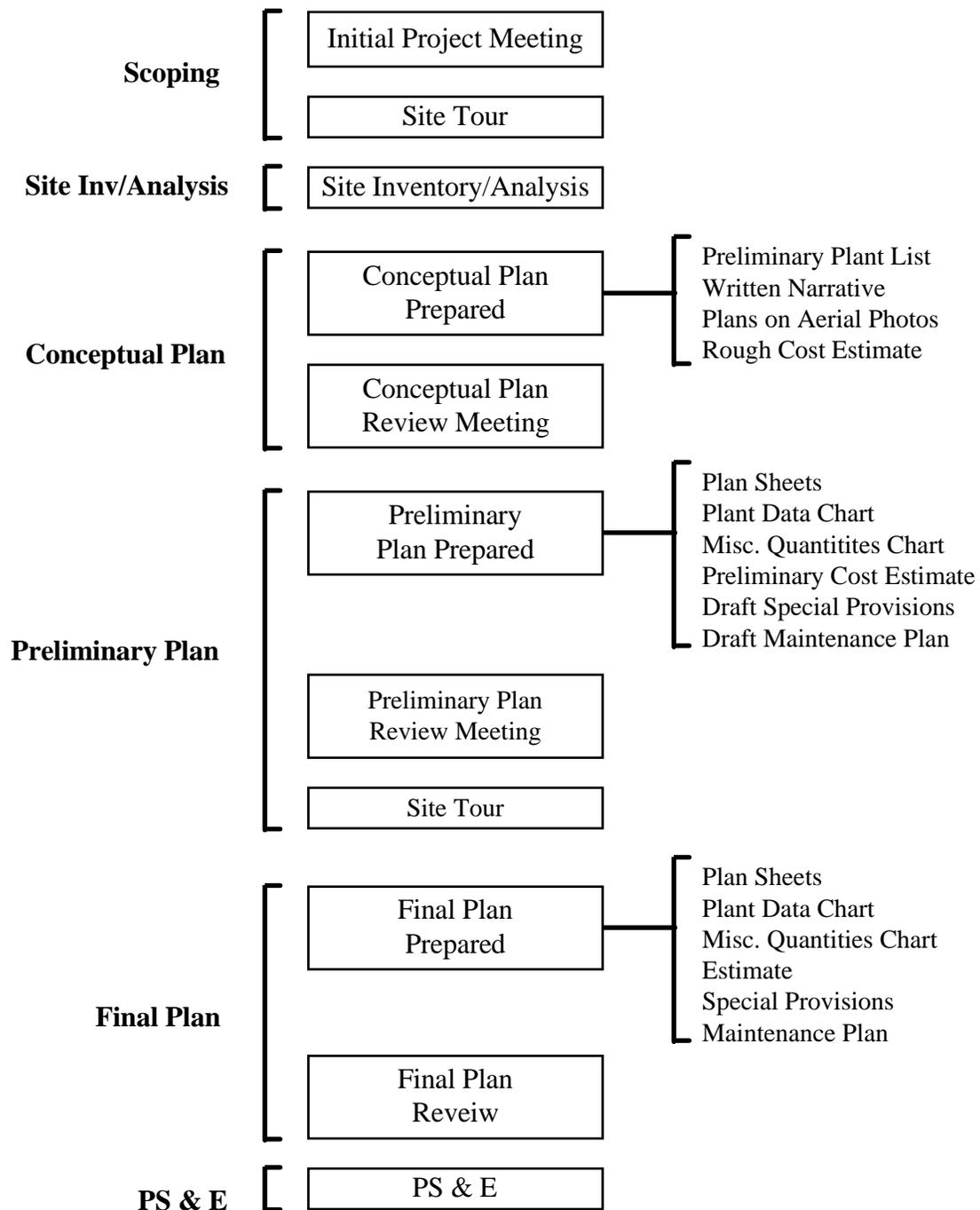


Planting Plan Development Process



Site Inventory/Conceptual Plan Checklist

To be done on an **aerial mosaic**

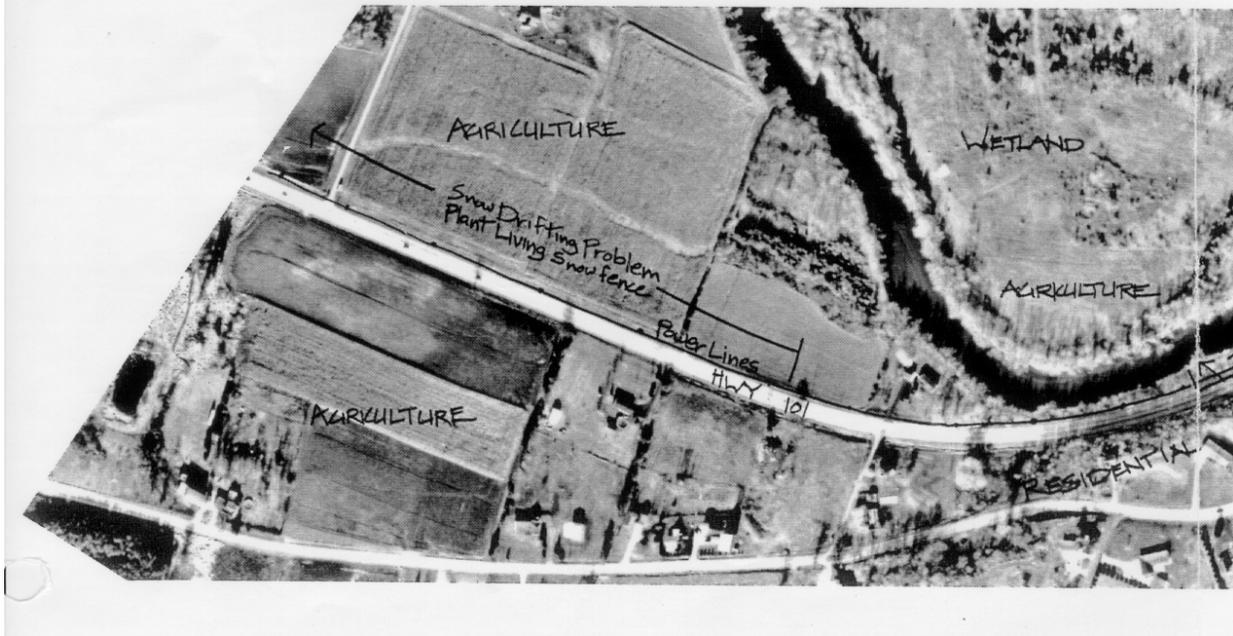
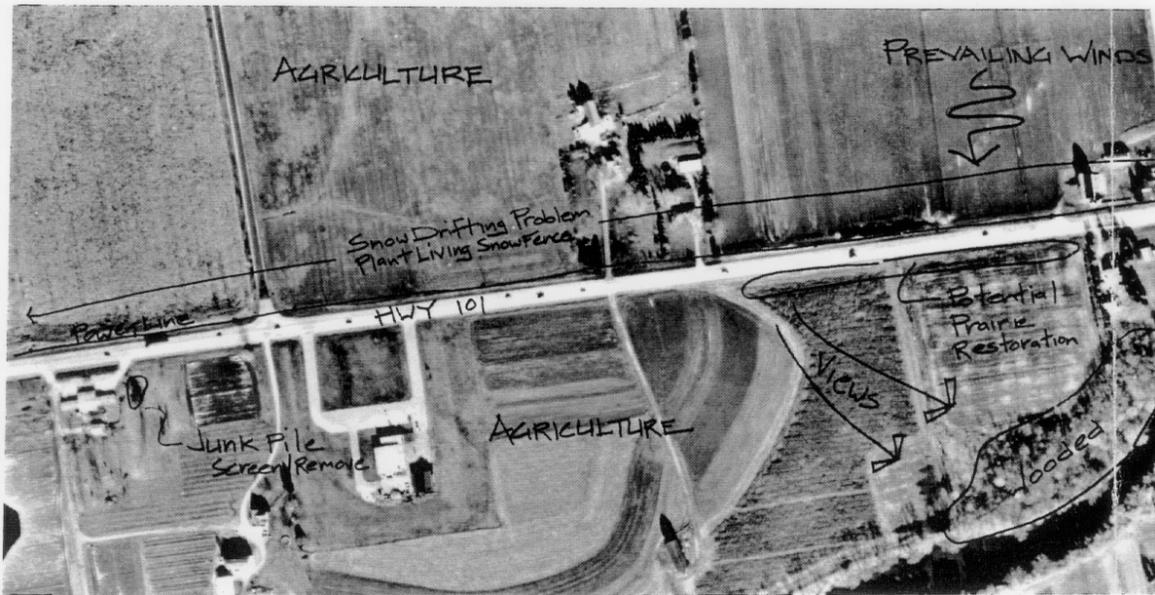
Scale: 1" = 200' (1:2000 metric) for urban projects

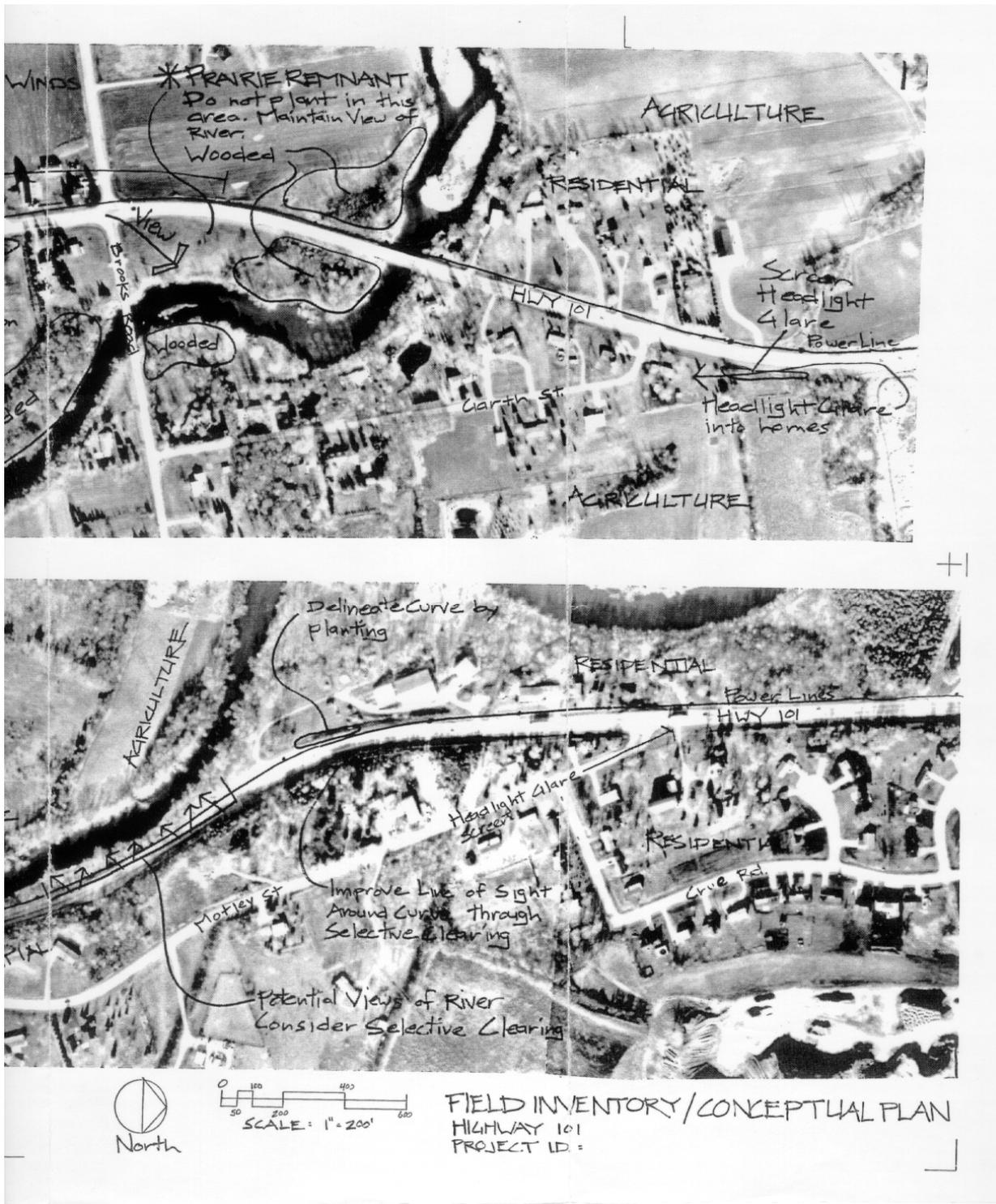
1" = 400' (1:4000 metric) for rural projects

Show and Label:

1. Adjacent Land Uses
2. Access
3. Views
4. Existing Terrain
5. Slopes and Slope Aspect
6. Soils
7. Existing Vegetation on and off the Right-of-Way (Check Vegetation Inventory)
 - a. Major Species
 - b. Vegetation to Transplant or Save
 - c. Areas for Selective Clearing
8. Identify General Areas for Planting
9. Drainage Ways and Ditches
10. Water Bodies
11. Micro-Climate
 - a. Highway Orientation
 - b. Prevailing Winds
 - c. Winter Shading
12. Problem Areas
 - a. Erosion
 - b. Headlights
 - c. Noise
 - d. Snow Drifting
 - e. Unpleasant Views
 - f. Buffer Adjacent Land Uses
 - g. Junk Yards
 - h. Roadway Alignment (Curves, Dead Ends)
13. Utilities (Underground, Overhead)
14. Outdoor Advertising Signs
15. Side Streets and Road Names
16. Structures (Noise Walls, Guard Rails)

*NOTES - TERRAIN - VERY GENTLY ROLLING
WOODED AREAS - SILVER MAPLE, RIVER BIRCH, WILLOW
THIS SECTION OF HWY - ALL FILL SLOPE





Narrative Checklist

I. Introduction

- A. Location
- B. Purpose
- C. Scope of Work

II. General Description of Route

- A. Terrain
- B. Vegetation
- C. Development
- D. Character
- E. Adjacent Land Use
- F. Views
- G. Features

III. Note Significant Considerations

- A. Impact of Improvement

IV. Proposed Landscape Treatments

- A. Trees, Shrubs, Evergreens and Vines
- B. Special Seeding
- C. Inert Ground Cover

V. Construction Schedule

- A. Dates

VI. Draft Maintenance Plan (general)

- A. Based on DOT Maintenance Policy or Pre-Arranged Maintenance Agreement with Local Governments

VII. Preliminary Plant List

Sample Narrative

Project LSF 03-1 (60)

I.D. 1101-4-00

The ZOO Freeway

West Florist Avenue to West County Line

U.S.H. 45, Milwaukee County

Conceptual Plan

Proposed Highway Planting

I. Introduction

Location

The Zoo Freeway, U.S.H. 45 from West Florist Avenue to the West County Line.

Purpose

To improve the freeway corridor by providing supplemental planting which will functionally and aesthetically complement and enhance the adjacent lands.

Scope of Work

The work will include planting woody plants (trees, shrubs, and vines), seeding a special seed mix, and placing inert ground cover material in defined areas.

II. General Description of Route and Proposed Landscape Treatment

This segment of U.S.H. 45, the Zoo Freeway, is part of a major transportation link between Milwaukee and areas to the north, especially the Fox River Valley, Green Bay, and north central areas. It is primarily made up of two large interchanges which collect and distribute traffic from local collectors and major arterials, primarily U.S.H. 41 and S.T.H. 145.

Lands adjacent to the freeway are gently rolling rural lands made up of wooded and open areas. The largest wooded area is public land occupied by the Menomonee River Parkway. Suburban residential development at Florist Avenue gives way to scattered residential units or clusters of units through rural lands to the north.

Florist Avenue to West Green Tree

This area is occupied by the south interchange, a major directional facility providing access to and from U.S.H. 41 and S.T.H. 175. Plantings through this section should look natural and blend with the adjoining lands. They should serve as guides to identify and define changes in alignment or dominant features of the highway. Plant masses will block out the view of traffic movements on some frontage roads and ramps which might distract the motorists. The size of the areas within this interchange dictates that much of the planting consist of groupings of tall-growing trees.

Green Tree to West County Line

The south part of this segment consists of two partial clover leaf interchanges which provide access to and from Good Hope Road and S.T.H. 100. A short distance further north, S.T.H. 145, the Fond du Lac freeway, intersects U.S.H. 45 and 41 to complete the north interchange. Lands adjacent to the freeway are primarily open agricultural lands or wooded areas. The mostly wooded Menomonee River Parkway occupies much of the land west of this segment, while lands to the east are open or partially wooded.

Proposed plantings in this interchange complex are massed to complement vegetation of adjacent lands and to provide visual separations between the various interchange roadways, ramps, and frontage roads. Combinations of deciduous trees, shrubs, and coniferous evergreens will make up most of the plant groupings.

III. Proposed Landscape Treatment

Trees, Shrubs, and Vines

The major part of the work consists of planting these major plant types. The planting layouts are designed to harmonize with landscaping done to the south on U.S.H. 45 and with existing native and introduced vegetation in the project area. Fairly large groups of tall-growing trees, in smaller sizes are proposed where feasible to complement the scale of the large interchange areas. The attached plant list is based on specific types of plants which have proven to be reliable under freeway conditions in the project area.

Seeding

Although grass is considered the basic living ground cover throughout the project, some areas presently covered in grass will be seeded with a special native grass and wildflower mix. The mix will add new dimensions through texture and color contrasts as well as providing a low maintenance cover in selected

locations, especially high visibility areas. In addition to the special mix, a seed mixture containing salt-tolerant grasses is proposed for some selected areas.

Inert Ground Cover

This treatment is proposed for relatively small areas just off the shoulders or behind curbs which no longer sustain suitable grass cover. These areas will be designed to present a well-defined shape of uniform texture between the shoulder or curb and the healthy grass.

IV. Construction

The project will be prepared for letting under one contract. Present plans provide for a 2001 fall letting, with work to be done during the 2002 spring planting season.

The project should be completed in the fall of 2004.

V. Maintenance

Present practices provide that the contractor care for the installation for two growing seasons. Thus, plants will have survived for two growing seasons and become established. Maintenance after the proving period is based on the premise that the plant material selected should become well-established after two or three growing seasons. Watering will be provided by watering trucks. Some plants which have a wide tolerance range and become established quite readily would only be watered in extreme situations.

Weed control is accomplished through the carefully controlled use of herbicides and re-mulching. This requirement diminishes as the plantings mature. District Operations personnel have agreed to budget for and provide necessary on-going maintenance after the Plant Establishment Period has expired. There are no local groups willing to assume maintenance responsibilities.

Preliminary Plant List

Project I.D. 1151-1-68
Lombardi Ave. to Velp Ave.
U.S.H. 41, Brown County

Large Deciduous Trees: Mature Height >35' or > 11m

Common Name	Caliper or Height When Planted	Root Zone Mode
Ash, Green	1 ¾" cal. (45 mm) or 8' (2.4 m), 5' (1.5 m) ht.	B & B or BR
Ash, White	1 ¾" cal. (45 mm) or 8' (2.4 m), 5' (1.5 m) ht.	B & B or BR
Honeylocust, Thornless	1 ¾" cal. (45 mm) or 8' ht. (2.4 m)	B & B or BR
Linden, American	1 ¾" cal. (45 mm) or 8' ht. (2.4 m)	B & B or BR
Maple, Norway	1 ¾" cal. (45 mm) or 8' ht. (2.4 m)	B & B or BR
Maple, Silver	8' ht. (2.4 m)	BR
Maple, Sugar	1 ¾" cal. (45 mm) or 8' (2.4 m), 5' (1.5 m) ht.	B & B or BR
Maple, Red	1 ¾" cal. (45 mm) or 8' (2.4 m)	B & B or BR
Oak, Red	5' ht. (1.5 m)	B & B

Medium to Small Deciduous Trees: Mature Height 15 - 35' or 5 - 11 m

Common Name	Caliper or Height When Planted	Root Zone Mode
Birch, River	6' ht. (1.8 m)	B & B
Hawthorn (Thicket, Washington)	5' ht. (1.5 m)	B & B
Ironwood	6' ht. (1.8 m)	B & B
Plum, American	3' ht. (900 mm)	BR
Serviceberry	5' ht. (1.5 m)	B & B only

Large and Small Evergreen Trees: Mature Height 10 - 30' + or 3.0 - 9.1 m

Common Name	Caliper or Height When Planted	Root Zone Mode
Arborvitae, American	2' ht. (600 mm)	B & B
Fir, White	3' ht. (900 mm)	B & B
Juniper, Virginia Varieties	2 ½' ht. (750 mm)	B & B or CG
Pine, Red and White	12" transplants* (300 mm) or 2 ½' ht. (750 mm)	B & B only
Spruce, White	12" transplants* (300 mm) or 2 ½' ht. (750 mm)	B & B only

Large, Medium and Small Deciduous Shrubs: Mature Height 4 - 20' or 1.2 - 6.1 m

Common Name	Caliper or Height When Planted	Root Zone Mode
Buffaloberry, Silver	2' ht. (600 mm)	BR
Dogwood, Grey	2' ht. (600 mm)	BR
Dogwood, Redosier	2' ht. (600 mm)	BR
Maple, Amur	2' ht. (600 mm)	BR
Peashrub, Siberian	2' ht. (600 mm)	BR
Sumac, Fragrant	2' ht. (600 mm)	BR
Sumac, Smooth	2' ht. (600 mm)	BR
Sumac, Staghorn	2' ht. (600 mm)	BR
Viburnum, American	2' ht. (600 mm)	BR

Vines

Common Name	Size When Planted	Root Zone Mode
Bittersweet, Common	2 year, No. 1	CG
Ivy, Engelmann	2 year, No. 1	CG

**Preliminary Estimate of Cost for
Proposed Planting Based on the Conceptual Plan for
the Gallifrey Freeway
East Lorien Avenue to East County Line**

<i>Type Classification and Common Name</i>	<i>Estimated Plant Quantities</i>	<i>Size When Planted and Root Zone Mode</i>	<i>Average Unit Price</i>
Large Deciduous Trees			
Ash, Honeylocust, Oak, Maple	50	½" cal. (12.7 mm) B & B	\$120.00
Hackberry, Linden	12	2 ½" cal. (63.5 mm) B & B	\$345.00
Medium Deciduous Trees			
Birch, Japanese Tree Lilac,	25	1 ½" cal. (38 mm) B & B	\$195.00
Serviceberry, American Hornbeam	25	1 ¾" cal. (45 mm) B & B	\$230.00
Small Deciduous Trees			
Flowering Crabs, Hawthorns	10	1 ½" cal. (38 mm) B & B	\$275.00
Large Evergreen Trees			
Pine, Spruce	40	6' (1.83 m) B & B	\$225.00
	15	15' (4.57m) B & B	\$1,400.00
Small Evergreen Trees			
Arborvitae, Red cedar	30	3' (900 mm) B & B	\$135.00
	75	4' (1.22 m) B & B	\$150.00
Large Deciduous Shrubs			
Viburnum, Redosier Dogwood	20	4' (1.22 m) B & B	\$90.00
Medium Deciduous Shrubs			
Rose, Spiraea	50	18" (460 mm) CG	\$25.00
Small Deciduous Shrubs			
Black Chokeberry, Bush Cinquefoil	10	24" (610 mm)	\$30.00
Evergreen Shrubs			
Junipers, Bird's Nest Spruce	25	18" (460 mm) CG	\$40.00
Vines			
Bittersweet, Engelmann Ivy	50	No. 1, 2 -year CG	\$25.00
Special Seeding (Prairie)			
Prairie Grasses and Forbs	96 lb. (43.54 kg)	Seed	\$350.00 lb. (\$771.62 kg)

Preliminary Plan Checklist

To be done on a base map

Scale: 1" = 50' (1:500 metric) for urban projects

1" = 100' (1:1000 metric) for rural projects

1. Label:

- a) Stationing and Reference Line
- b) North Arrow
- c) Scale
- d) Adjacent Land Uses
- e) Highway, Road, and Street Names
- f) Utilities (underground and overhead)
- g) Views
- h) Structures
- i) Right-of-Way Lines
- j) Fence where Different from Right-of -Way Lines
- k) Drainage Structures and Culverts
- l) Match Lines
- m) Any Other Information Pertinent to Planting

2. Show outlines of existing vegetation on and off the right-of-way.

3. Identify proposed individual plants and plant groupings.

4. Draw plant symbols to standard sizes representing mature plants and label with names and quantities.

5. Identify shrub beds.

6. Identify areas to be seeded.

7. Provide preliminary

- a) Quantities
- b) Plant Data Chart
- c) Draft Special Provisions (to supplement Standard Specifications)
- d) Cost Estimate
- e) Maintenance Plan

Sample Plant Data Chart

SYM.	Common Name	Scientific Name	Type	Ave. Mature Height	Size (cal. or ht.) When Planted	Root Zone Mode
	Large Deciduous Trees					
WA	Ash, White	Fraxinus americana	1	75'	1 ¼" cal.	BR
WAA	Ash, Autumn Purple	F.amer. Autumn Purple	1	50'	1 ¼" cal.	BR
AL	Linden, American	Tilia americana	1	80'	2" cal.	B&B
RM	Maple, Red	Acer rubrum	1	75'	8' ht.	BR
SM	Maple, Sugar	Acer saccharum	1	75'	2" cal.	B&B
SM	Maple, Sugar	Acer saccharum	1	75'	8' ht.	BR
BO	Oak, Bur	Quercus macrocarpa	1	75'	1 ½" cal.	B&B
	Medium Deciduous Trees					
QA	Aspen, Quaking	Populus tremuloides	1	60'	8' ht.	BR
PB	Birch, Paper	Betula papyrifera	1	50'	1 ¼" cal.	B&B
	Small Deciduous Trees					
AF	Filbert, American	Corylus americana	3	20'	4' ht.	BR
DH	Hawthorn, Downy	Crataegus mollis	3	25'	5' ht.	B&B
	Large Evergreen Trees					
CH	Hemlock, Canadian	Tsuga canadensis	4	50'	3' ht.	B&B
EWP	Pine, Eastern White	Pinus strobus	4	75'	3' ht.	B&B
	Small Evergreen Trees					
AA	Arborvitae, American	Thuja occidentalis	6	30'	3' ht.	*B&B
	Large & Med. Decid. Shrubs					
RD	Dogwood, Redosier	Cornus sericea	2	8'	3' ht.	BR
SS	Sumac, Smooth	Rhus glabra	3	15'	2' ht.	BR

BR: Bare Root

B&B: Balled and Burlapped

CG: Container Grown

* Container Grown (CG) may be substituted

Note: Names of plants should be listed in alphabetical order using the common name

Example: Ash, Green

Sample Plant Data Chart

Minimum Size					Brace or Guy	Fert. Units Req'd.	Rodent Protct Req'd.	Mulch Ring Diam.	PLT BED DTL
Ball/Pot		Root Spread	Plant Hole						
Diam.	Depth		Diam.	Depth					
-	-	20"	32"	14"	BRACE	3	YES	44"	
-	-	20"	32"	13"	BRACE	3	YES	44"	
24"	16"	-	36"	16"	GUY	4	YES	48"	
-	-	18"	30"	14"	BRACE	3	YES	42"	
24"	16"	-	36"	16"	GUY	4	YES	48"	
-	-	18"	30"	14"	BRACE	3	YES	42"	
20"	14"	-	32"	14"	BRACE	3	YES	44"	
-	-	18"	30"	14"	BRACE	3	YES	42"	
18"	14"	-	30"	14"	BRACE	3	YES	42"	
-	-	16"	28"	12"	NO	3	NO	40"	
16"	12"	-	28"	12"	NO	3	NO	40"	
14"	11"	-	26"	11"	NO	3	NO	38"	
14"	11"	-	26"	11"	NO	3	NO	38"	
14"	11"	-	26"	11"	NO	2	NO	38"	
-	-	14"	26"	11"	NO	2	NO	BED	C
-	-	11"	Accom. Roots		NO	1	NO	NONE	

Sample Quantities By Sheet (Miscellaneous Quantities)

SYM.	Common Name	Size When Planted	Root Zone Mode	Sheet Numbers					
				1	2	3	4	5	Totals
				Each	Each	Each	Each	Each	Each
WA	Ash, White	1 ¼" cal.	BR	7		9	3		19
WAA	Ash, Autumn Purple	1 ¼" cal.	BR		6		8	7	21
AL	Linden, American	2" cal.	B&B	4	9	4		3	20
RM	Maple, Red	8' ht.	BR		3		1		4
SM	Maple, Sugar	2" cal.	B&B	4					4
SM	Maple, Sugar	8' ht.	BR		8		2	6	16
BO	Oak, Bur	1 ½" cal.	B&B		6	5	3		14
QA	Aspen, Quaking	8' ht.	BR	1		4		6	11
PB	Birch Paper	1 ¼" cal.	B&B	4				7	11
AF	Filbert, American	4' ht.	BR	8				2	10
DH	Hawthorn, Downy	5' ht.	B&B	1		4			5
CH	Hemlock, Canadian	3' ht.	B&B		7	3	1		11
EWP	Pine, Eastern White	3' ht.	B&B	1		3	2	5	11
AA	Arborvitae, American	3' ht.	B&B	10			20	12	42
RD	Dogwood, Redosier	3' ht.	BR		15		33	22	70
SS	Sumac, Smooth	2' ht.	BR	65	22		40	17	144

WISCONSIN DEPARTMENT OF TRANSPORTATION

PAGE: 1

DATE: 02/09/99

PROPOSAL ESTIMATE

REVISED:

CONTRACT:
C0001-01-10

PROJECT(S):
0001-01-10

FEDERAL ID(S):
N/A

CONTRACTOR :

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS CTS	EST AMOUNT DOLLARS CTS
SECTION 0001 LANDSCAPE PLANTINGS				29,900.00
0010	61910 MOBILIZATION	(1.000) EACH	2,500.00000	2,500.00
0020	63201 TREES, ASH, WHITE, 1.5-INCH CAL, B&B	5.000 EACH	235.00000	1,175.00
0030	63202 TREES, HACKBERRY, COMMON, 2-INCH CAL, B&B	12.000 EACH	285.00000	3,420.00
0040	63203 TREES, SPRUCE, WHITE, 3-FT CAL, B&B	22.000 EACH	175.00000	3,850.00
0050	63261 SHRUBS, DOGWOOD, REDOSIER, 3-FT HEIGHT, BR	54.000 EACH	20.00000	1,080.00
0060	63262 SHRUBS, VIBURNUM, AMERICAN CRANBERRYBUSH, 4-FT HEIGHT, B&B	35.000 EACH	95.00000	3,325.00
0070	63281 VINES, IVY, ENLEMANN, 2-YEAR, NO. 1, CG	40.000 EACH	20.00000	800.00
0080	90033 MISC 90033A MULCHING, RED GRANITE	500.000 S.Y.	7.50000	3,750.00
0090	90036 MISC 90036A SEEDING, SPECIAL	200.000 LB.	50.00000	10,000.00
	TOTAL ESTIMATE			29,900.00

() WILL BE BID AS LUMP

Final Plan Checklist

1. Title sheet (if a stand-alone project)
2. Typical sections and standard detail sheets
 - a. Typical section of highway and planting
 - b. Standard Tree - Planting Detail Sheet ([SDD 14A2](#))
 - c. Any other special details
3. Transport estimate
4. Miscellaneous quantities
 - a. Plant and seed quantities by location and totaled
 - b. Any other miscellaneous quantities
5. Plant data chart
6. Right-of-way plat if necessary
7. Plan sheets
 - a. Same base map and scale as preliminary plan
 - b. Place informal page numbers under the title block on the standard plan sheet
 - c. Include a legend showing plant symbols and common names on each page
8. Standard Detail Drawings
 - a. List the numbers of required standard detail drawings on the first typical sections and detail sheet.
9. Cross-sections (when appropriate)
10. Plan letter
 - a. Include for a stand-alone project if the consultant and the district agree it is the consultant's responsibility.
 - b. Include for a project that is part of a larger project, and supply the district with any special information about the landscaping
11. Specifications and Special Provisions
12. Contract Time for Completion form (see [FDM 19-10 Attachment 30.1](#))
13. Maintenance Plan (not part of the PS&E package)