Appendix C

Landscape Design

100% SUBMISSION

GWP #2006-21-00 Contract #2020-2150

LANDSCAPE DESIGN

Ministry of Transportation



REV DATE DESCRIPTION

GWP 2006-21-00 CONT 2020-2150

LANDSCAPE INDEX

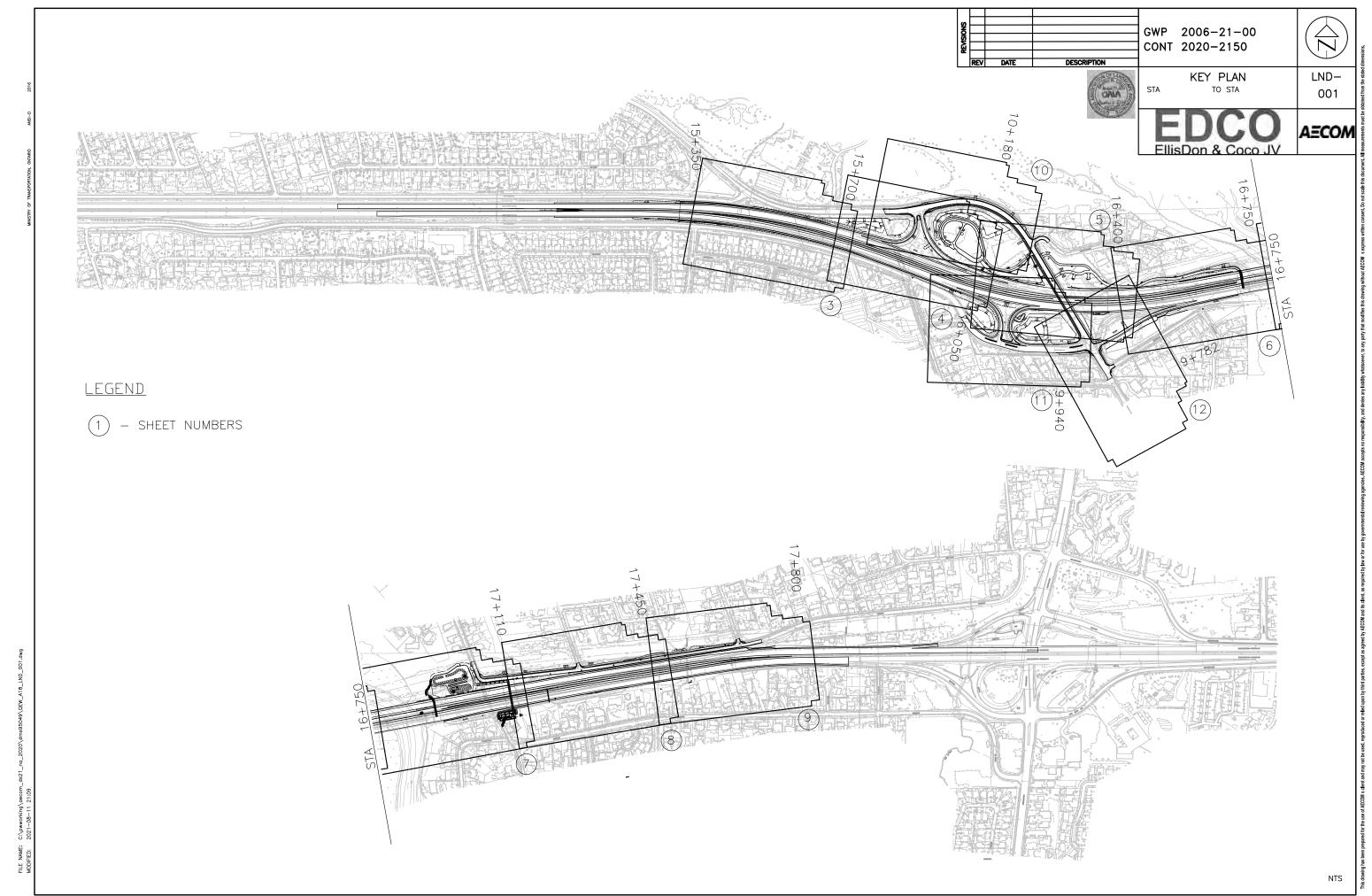
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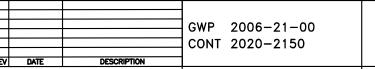
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SHEET No.	DESCRIPTION	REV	DATE
LND-000	LANDSCAPE - COVER SHEET	0	AUG 2021
LND-000-1	LANDSCAPE - INDEX	0	AUG 2021
LND-001	LANDSCAPE - KEY PLAN	0	AUG 2021
LND-002	LANDSCAPE - LEGEND AND NOTES	0	AUG 2021
LND-003	LANDSCAPE - STA 15+350 TO STA 15+700	0	AUG 2021
LND-004	LANDSCAPE - STA 15+700 TO STA 16+050	0	AUG 2021
LND-005	LANDSCAPE - STA 16+050 TO STA 16+400	0	AUG 2021
LND-006	LANDSCAPE - STA 16+400 TO STA 16+750	0	AUG 2021
LND-007	LANDSCAPE - STA 16+750 TO STA 17+110	0	AUG 2021
LND-008	LANDSCAPE - STA 17+110 TO STA 17+450	0	AUG 2021
LND-009	LANDSCAPE - STA 17+450 TO STA 17+800	0	AUG 2021
LND-010	LANDSCAPE - MISSISSAUGA ROAD - STA 10+180 TO STA 10+537	0	AUG 2021
LND-011	LANDSCAPE - SOUTH SHERIDAN WAY - STA 9+645 TO STA 9+940	0	AUG 2021
LND-012	LANDSCAPE - MISSISSAUGA ROAD - STA 9+782 TO STA 9+935	0	AUG 2021
LND-013	LANDSCAPE - WET POND	0	AUG 2021
LND-014	LANDSCAPE - DRY POND	0	AUG 2021
LND-015	LANDSCAPE - DETAILS I	0	AUG 2021
LND-016	LANDSCAPE - PLANT LISTS	0	AUG 2021
LND-017	LANDSCAPE - DETAILS II	0	AUG 2021
LND-018	LANDSCAPE - DETAILS III	0	AUG 2021

SHEET No.	DESCRIPTION	REV	DATE



NOTES:

- ALL DISTURBED AREAS TO BE RESTORED WITH MINIMUM 150mm DEEP TOPSOIL AND THE INDICATED SEED MIX.
- LARGE CALIPER TREES SHALL BE SPACED 10.0m DN CENTER, UNLESS INDICATED OTHERWISE, AND A MINIMUM OF 1.5m FROM THE MULTI-USE PATH/TRAIL EDGE. SEE STREETSCAPE PLANTING SETBACKS NOTE FOR FURTHER INFORMATION.
- THE QUANTITY OF STREET TREES ALONG MISSISSAUGA ROAD WILL BE EQUAL TO MEET AN AVERAGE SPACING OF 10.0m ON CENTER, HOWEVER, STREET TREES MAY BE PLACED IN GROUPINGS OF 3-5 TREES WITH A MINIMUM SPACING OF 8.0m ON CENTER.
- CONIFEROUS TREES SHALL BE PLANTED MINIMUM 4.0m ON CENTER, UNLESS INDICATED OTHERWISE ON THE MASTER PLANT LIST ON SHEET LND-016.
- ALL PLANTING WITHIN THE ESTIMATED HONI CORRIDOR SHALL BE AS PER THE HONI APPROVED PLANT LIST AND SHALL NOT EXCEED A MAXIMUM HEIGHT OF 4m AT MATURITY.



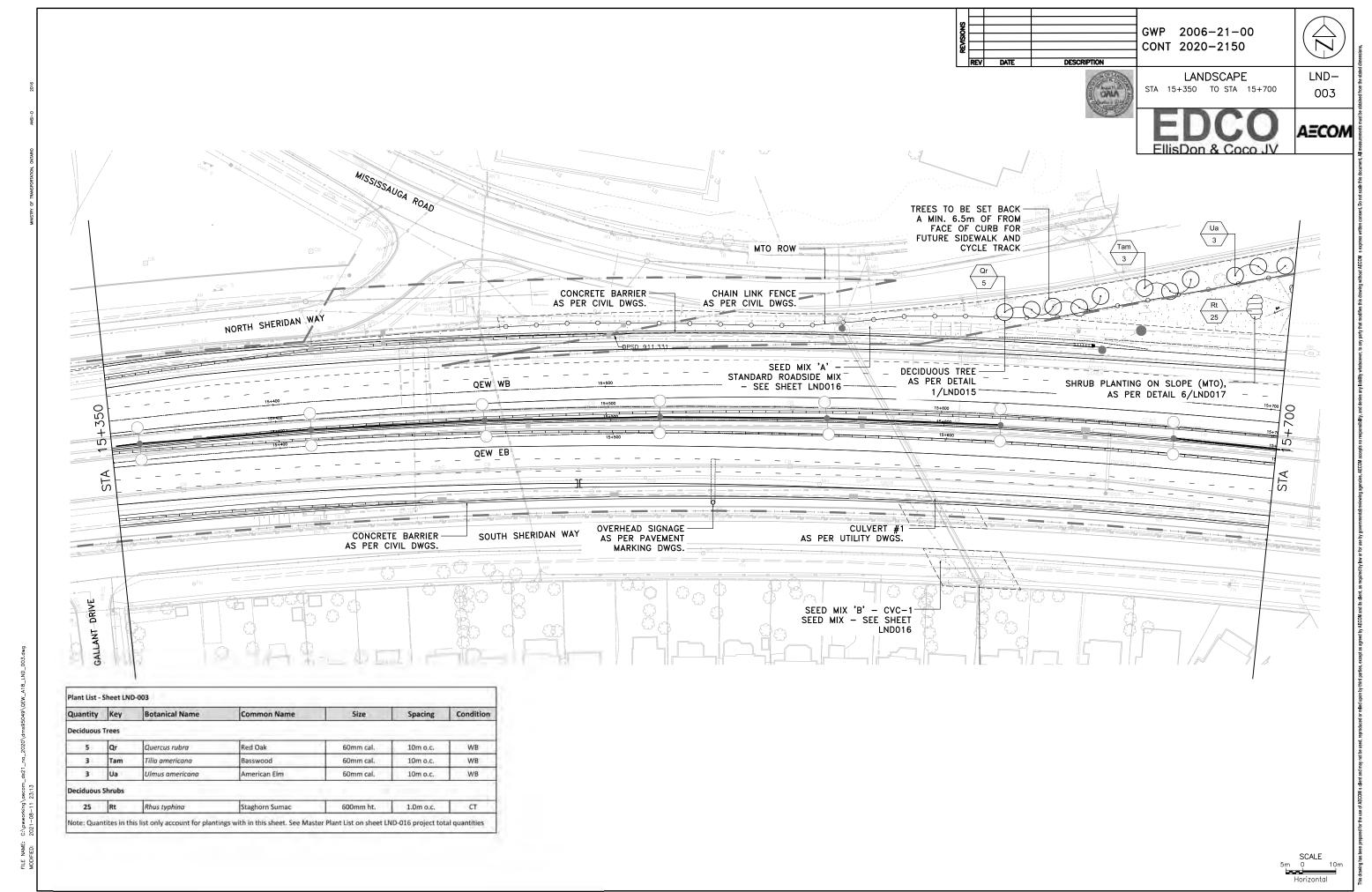


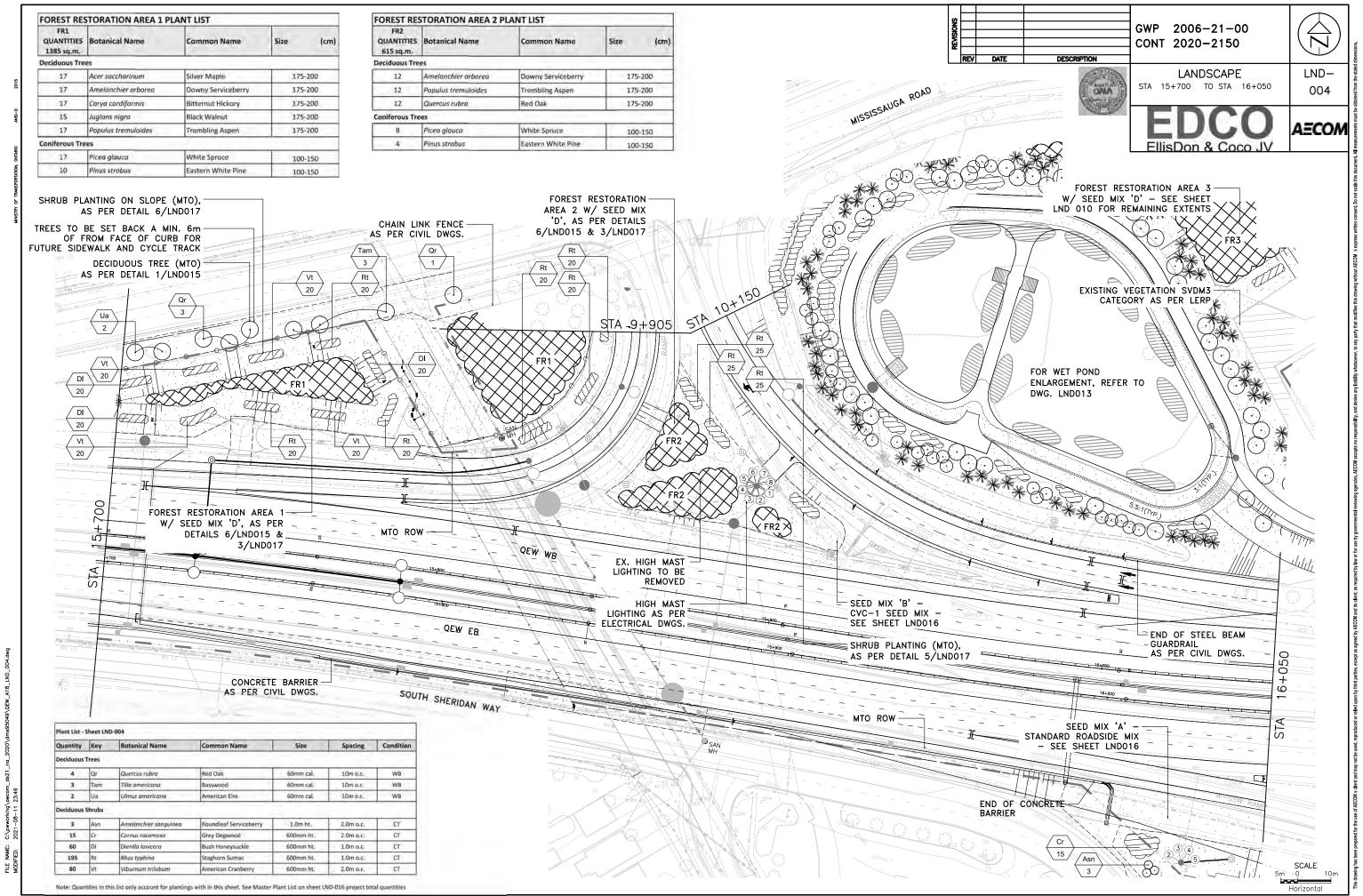
LANDSCAPE **LEGEND AND NOTES** LND-002

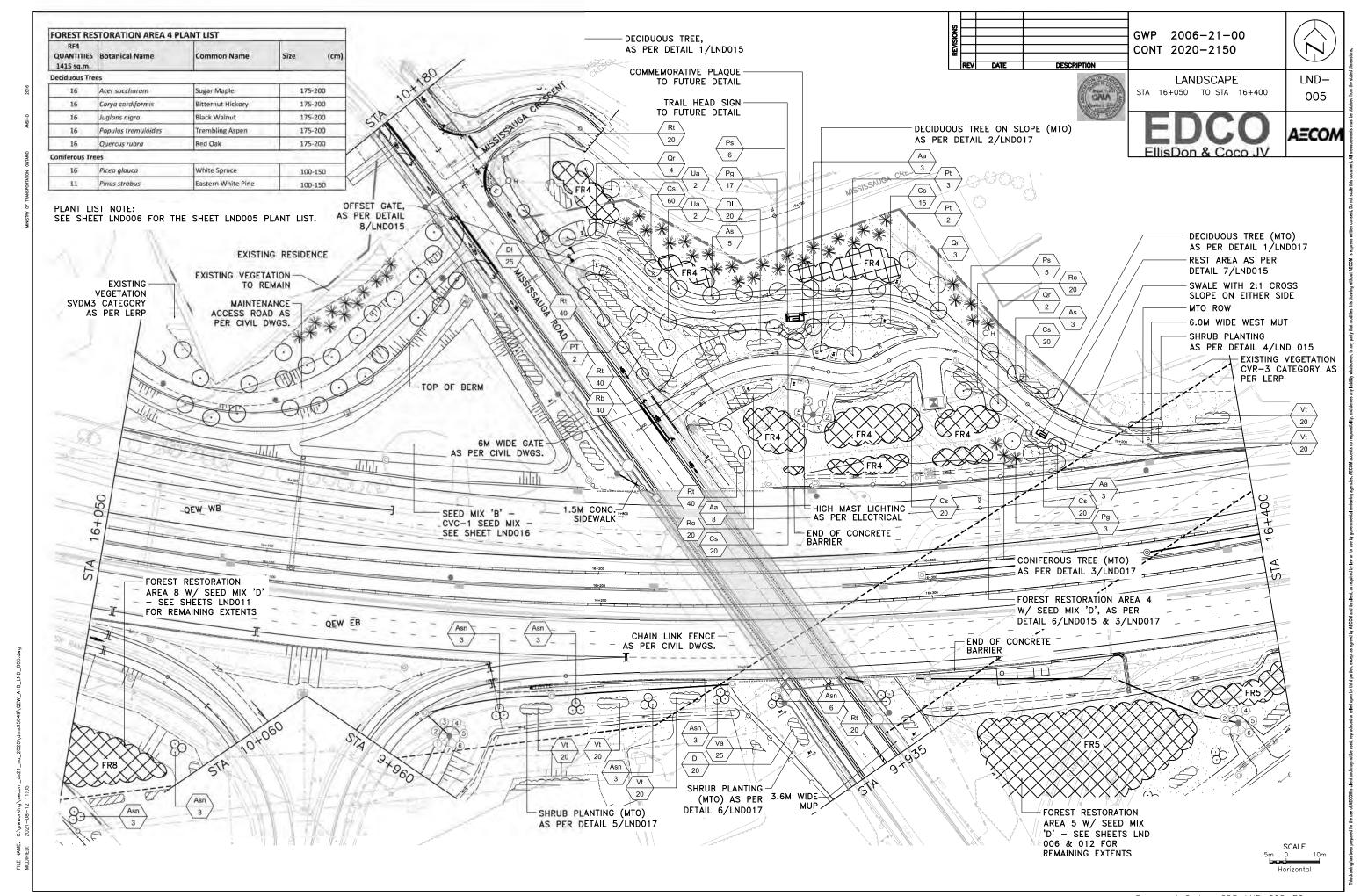
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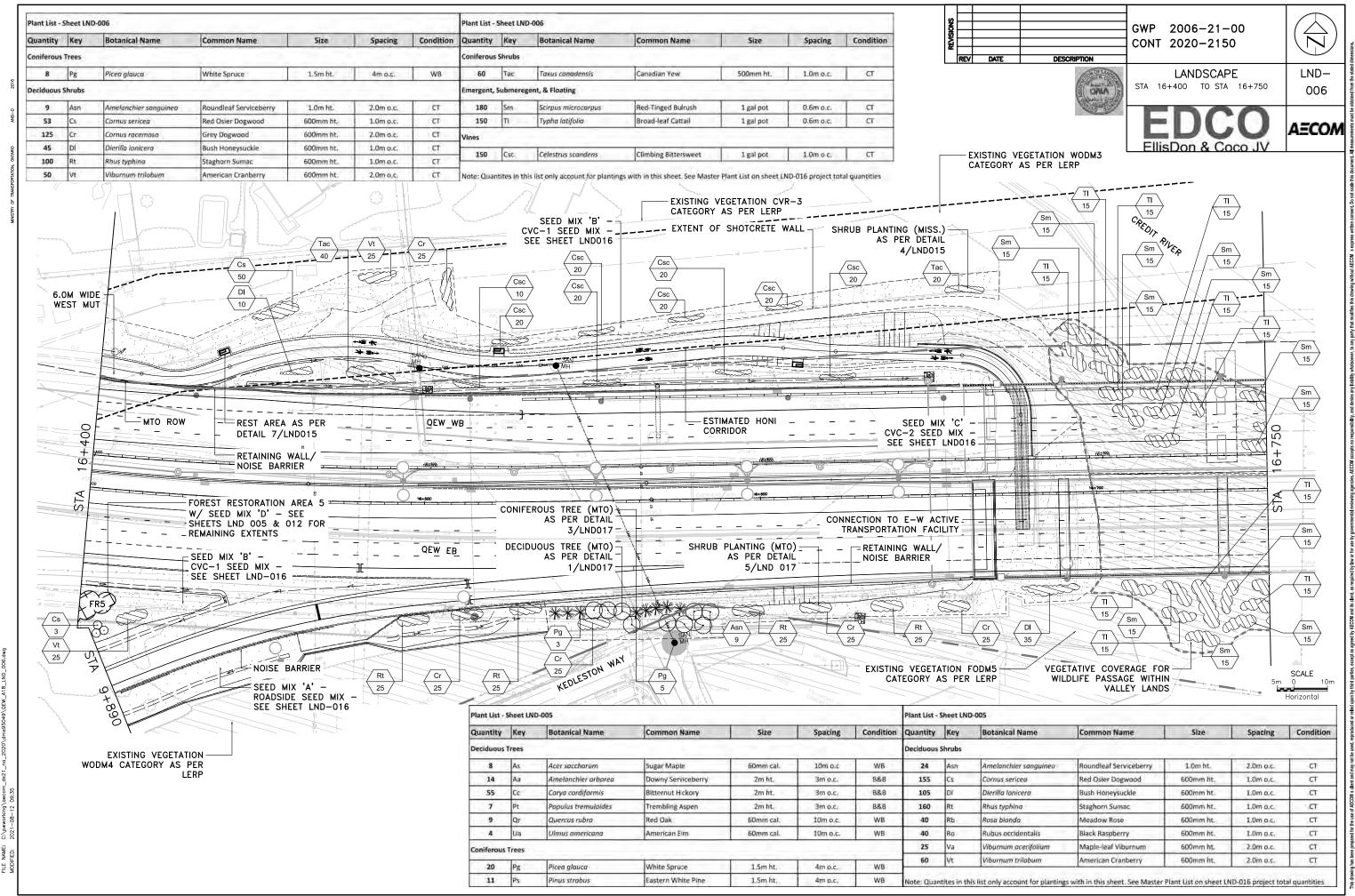
STREETSCAPE PLANTING SETBACKS:

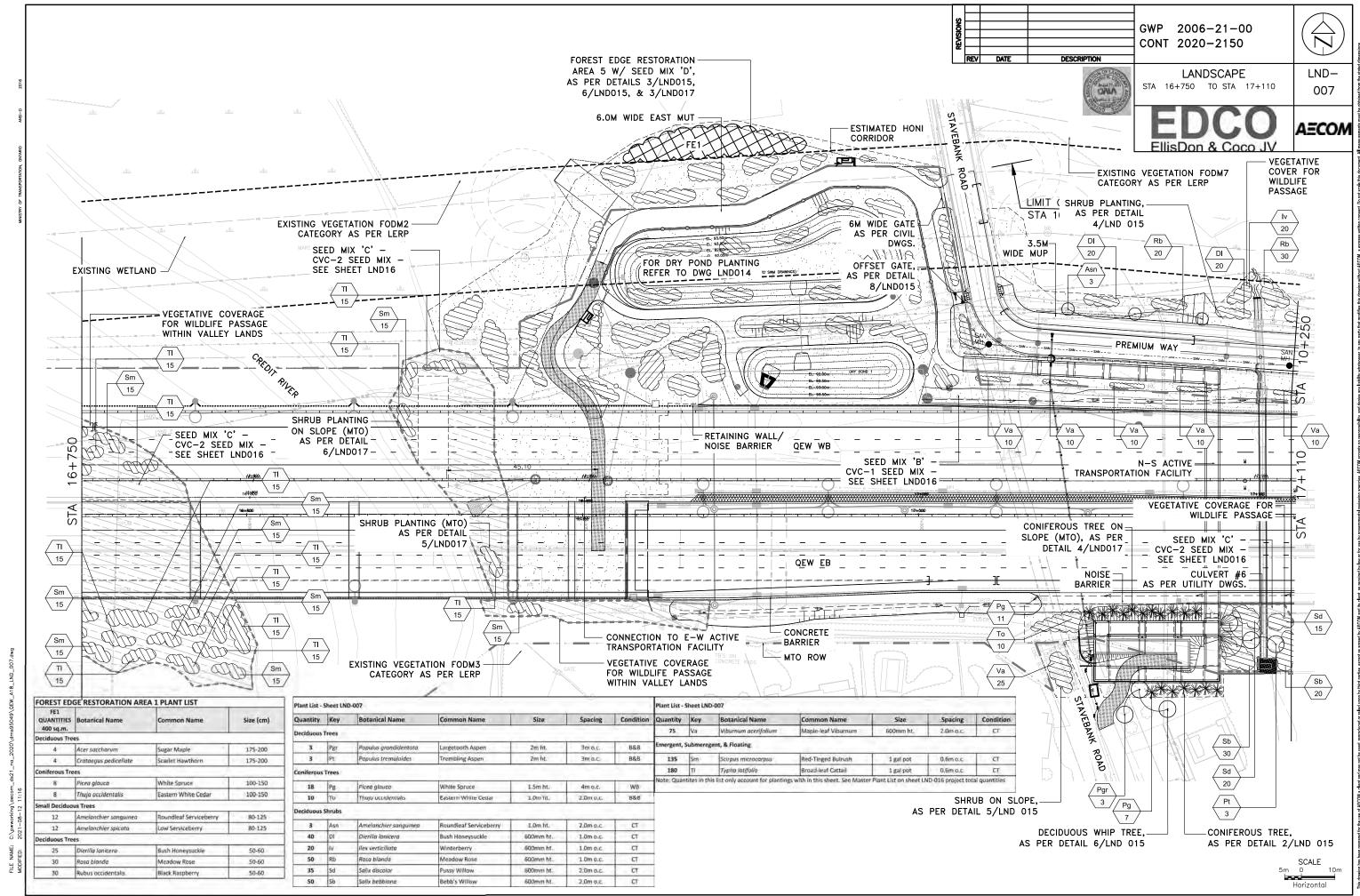
- TREES SHOULD NOT BE PLANTED WITHIN SIGHT TRIANGLES.
- PROVIDE A MINIMUM 6.0m SETBACK BETWEEN THE LIGHT STANDARD AND THE PROPOSED TREE PLANTINGS.
- PROVIDE A MINIMUM SETBACK OF 1.5m BETWEEN THE TRUNK OF THE PROPOSED DECIDUOUS TREE AND EXISTING SURFACE INFRASTRUCTURE, FOR CONIFEROUS TREES, PROVIDE A MINIMUM 1.0m SETBACK BETWEEN INFRASTRUCTURE AND THE ESTIMATED DRIP LINE AT 15 YEARS, SETBACKS FROM UNDERGROUND AND OVERHEAD INFRASTRUCTURE SHALL BE AS PER UTILITY COMPANY REQUIREMENTS
- PROVIDE A MINIMUM 0.3m SETBACK BETWEEN THE TRUNK OF THE TREE AND THE NOISE WALL, WHERE NOISE WALLS ARE ABSENT AND PLANTING OF TREES ON PRIVATE PROPERTY IS NOT POSSIBLE, PROVIDE A MINIMUM 0.15m SETBACK BETWEEN THE TRUNK OF THE TREE AND THE PROPERTY LINE.
- PROVIDE A MINIMUM 1.0m SETBACK FROM THE EDGE OF SHRUB BEDS TO PEDESTRIAN SIDEWALKS OR MULTI-USE TRAILS TO ENSURE PEDESTRIAN SECURITY.

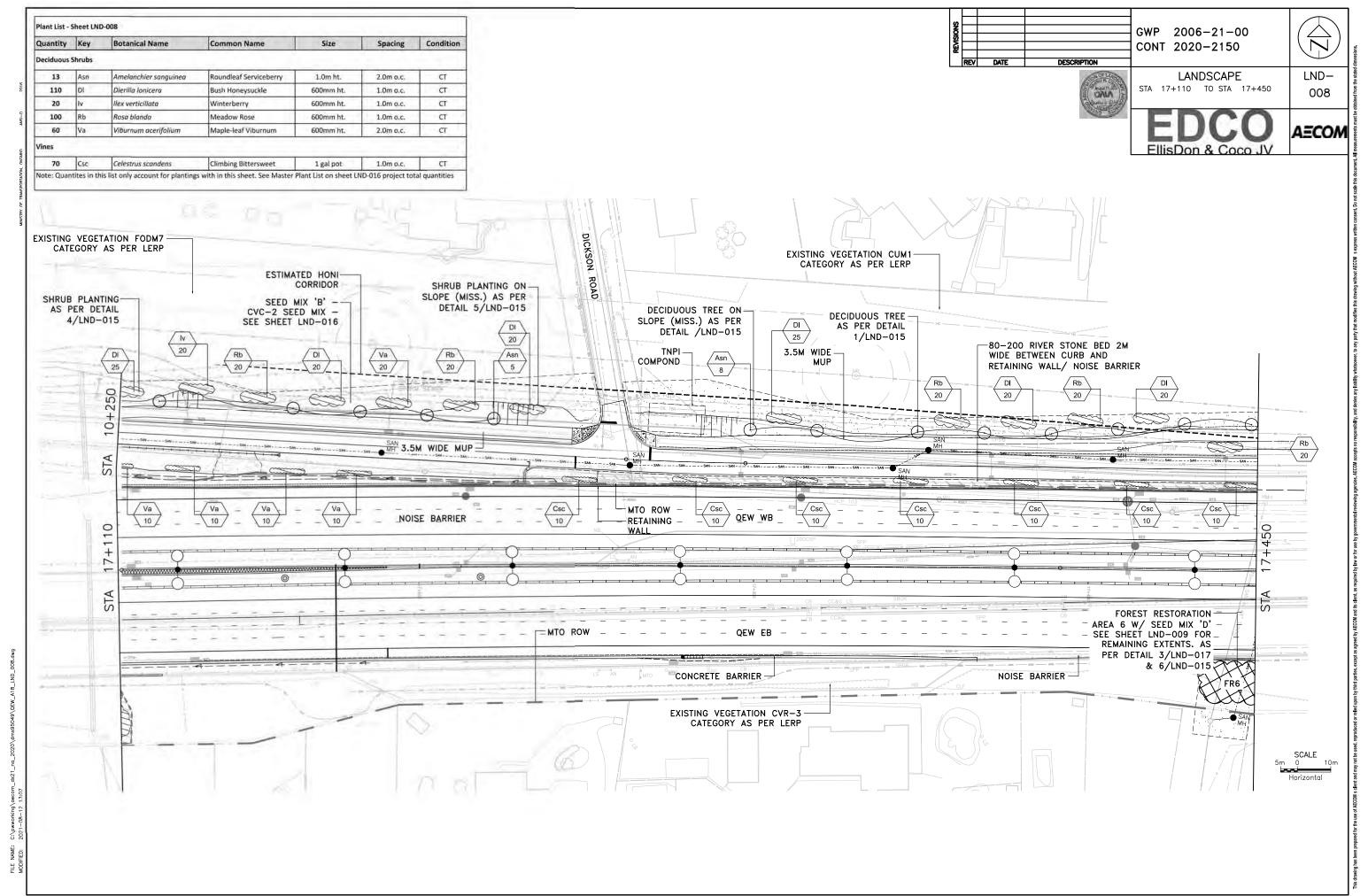


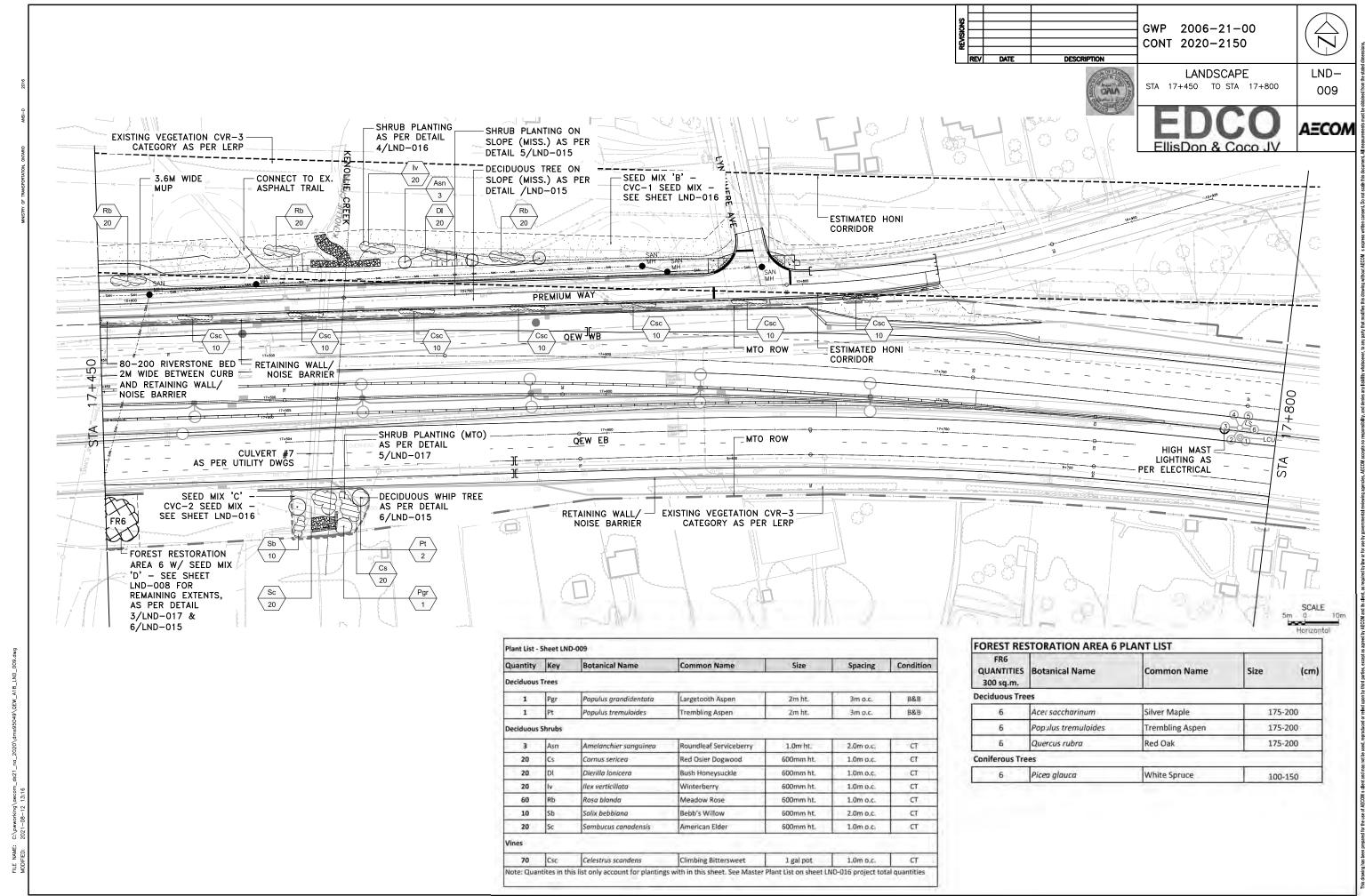


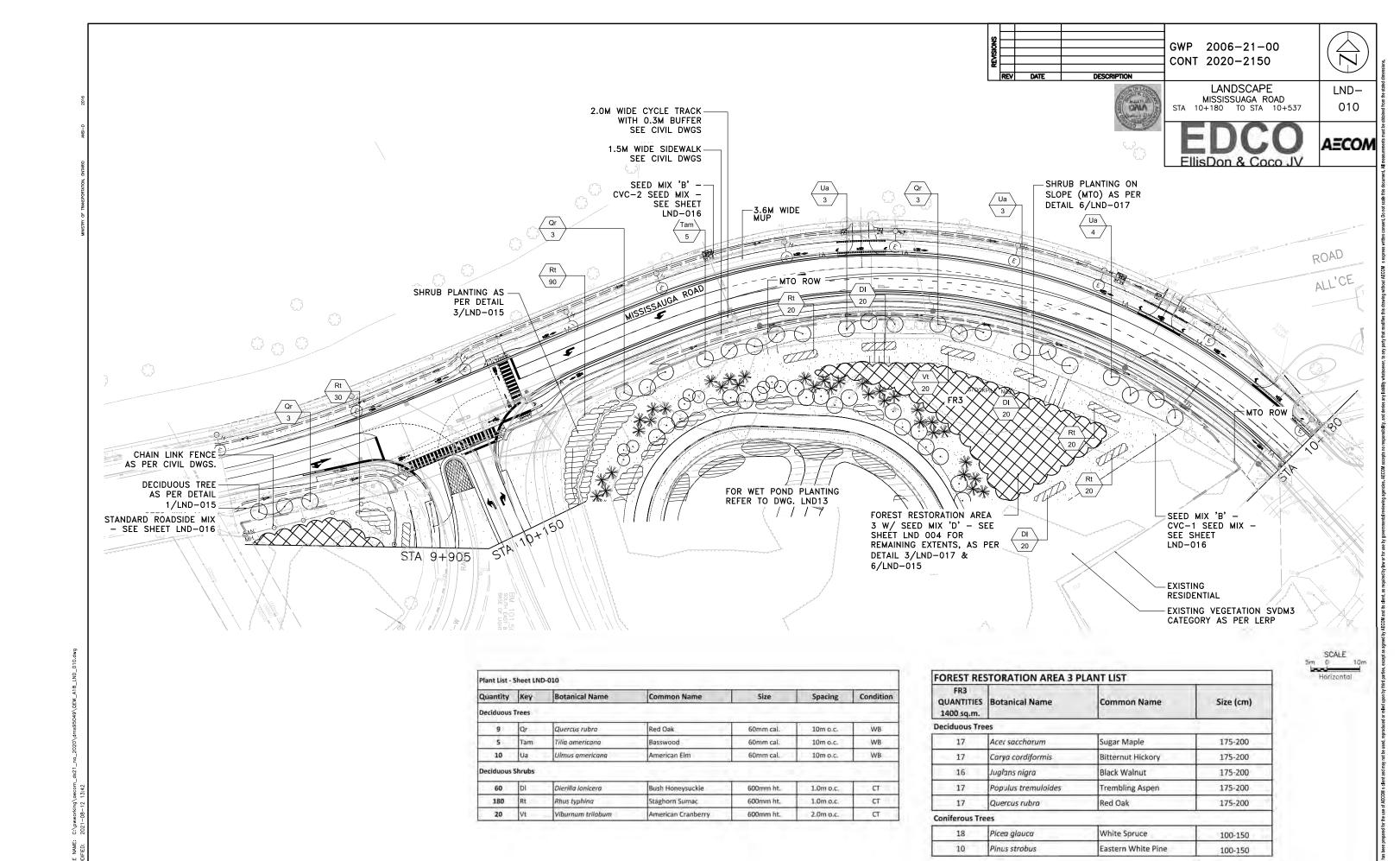














12000 TO

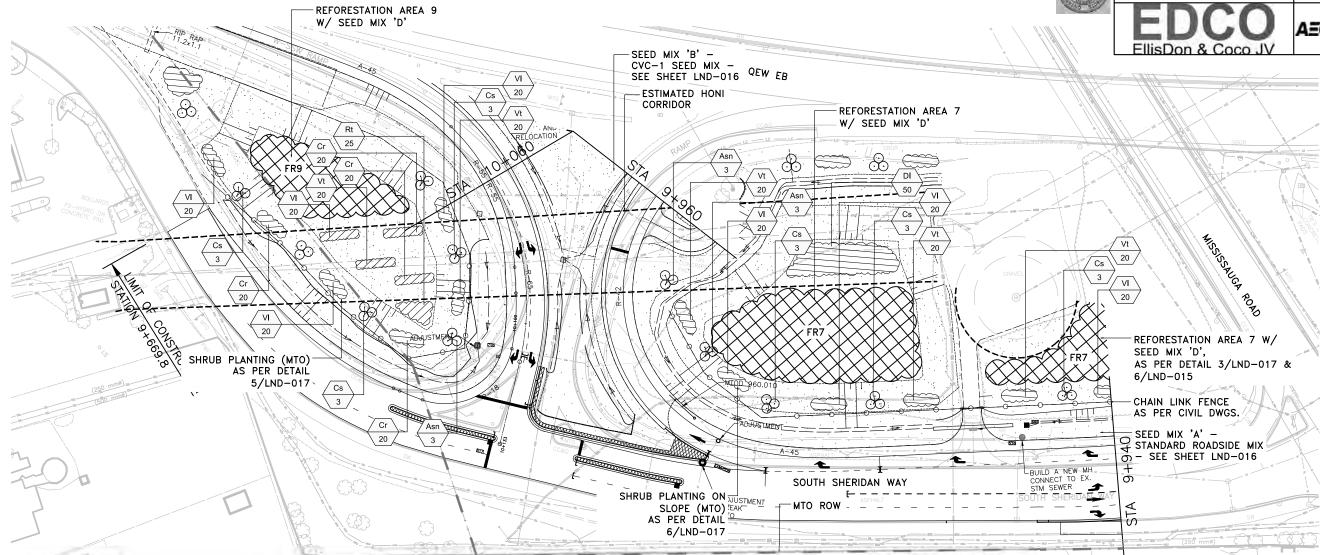
GWP 2006-21-00 CONT 2020-2150

LND-

LANDSCAPE
SOUTH SHERIDAN WAY
STA 9+645 TO STA 9+940

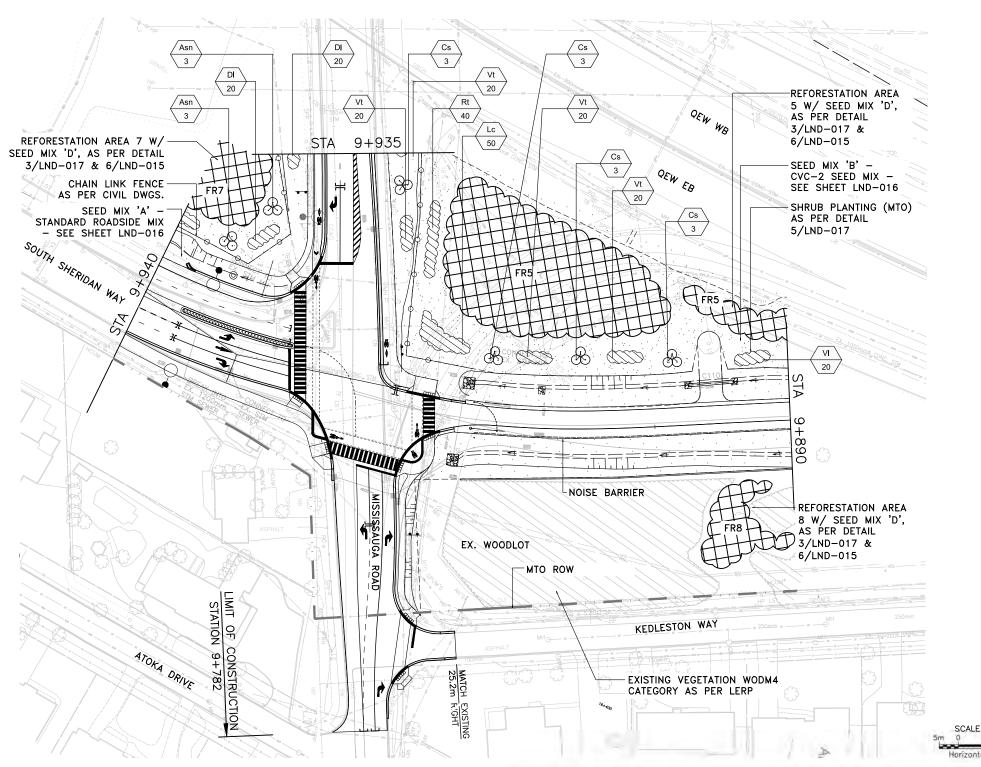
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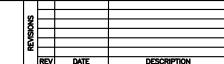


Quantity	Key	Botanical Name	Common Name	Size	Spacing	Condition
Deciduous	Shrubs					
9	Asn	Amelanchier sanguinea	Roundleaf Serviceberry	1.0m ht.	2.0m o.c.	CT
15	Cs	Cornus sericea	Red Osier Dogwood	600mm ht.	1.0m o.c.	ст
80	Cr	Cornus racemasa	Grey Dogwood	600mm ht.	2.0m o.c.	ст
50	DI	Dierilla Ionicera	Bush Honeysuckle	600mm ht.	1.0m o.c.	CT
25	Rt	Rhus typhina	Staghorn Sumac	600mm ht.	1,0m o.c.	CT
140	VI.	Viburnum lentago	Nannyberry	600mm ht.	2.0m o.c.	СТ
100	Vt	Viburnum trilobum	American Cranberry	600mm ht.	2.0m o.c.	CT

FR9 QUANTITIES 540 sq.m.	Botanical Name	Common Name	Size (cm)
Deciduous Tre	es		Ž
7	Acer saccharinum	Silver Maple	175-200
7	Amelanchier arborea	Downy Serviceberry	175-200
7	Carya cordiformis	Bitternut Hickory	175-200
5	Juglans nigra	Black Walnut	175-200
7	Quercus rubra	Red Oak	175-200
Coniferous Tre	es		
7	Picea glauca	White Spruce	100-150
4	Pinus strobus	Eastern White Pine	100-150



Plant List - Sheet LND-012						
Quantity	Key	Botanical Name	Common Name	Size	Spacing	Condition
Deciduous	Shrubs					
6	Asn	Amelanchier sanguinea	Roundleaf Serviceberry	1.0m ht.	2.0m o.c.	CT
12	Cs	Cornus sericea	Red Osier Dogwood	600mm ht.	1.0m o.c.	ст
40	DI	Dierilla Ionicera	Bush Honeysuckle	600mm ht.	1.0m o.c.	ст
50	Lc	Lonicera canadensis	Dry Fly Honeysuckle	600mm ht.	1.0m o.c.	ст
40	Rt	Rhus typhina	Staghorn Sumac	600mm ht.	1.0m o.c.	CT
20	VI	Viburnum lentago	Nannyberry	600mm ht.	2.0m o.c.	CT
80	Vt	Viburnum trilobum	American Cranberry	600mm ht.	2.0m o.c.	СТ



GWP 2006-21-00 CONT 2020-2150



LANDSCAPE MISSISSUAGA ROAD STA 9+782 TO STA 9+935 12010

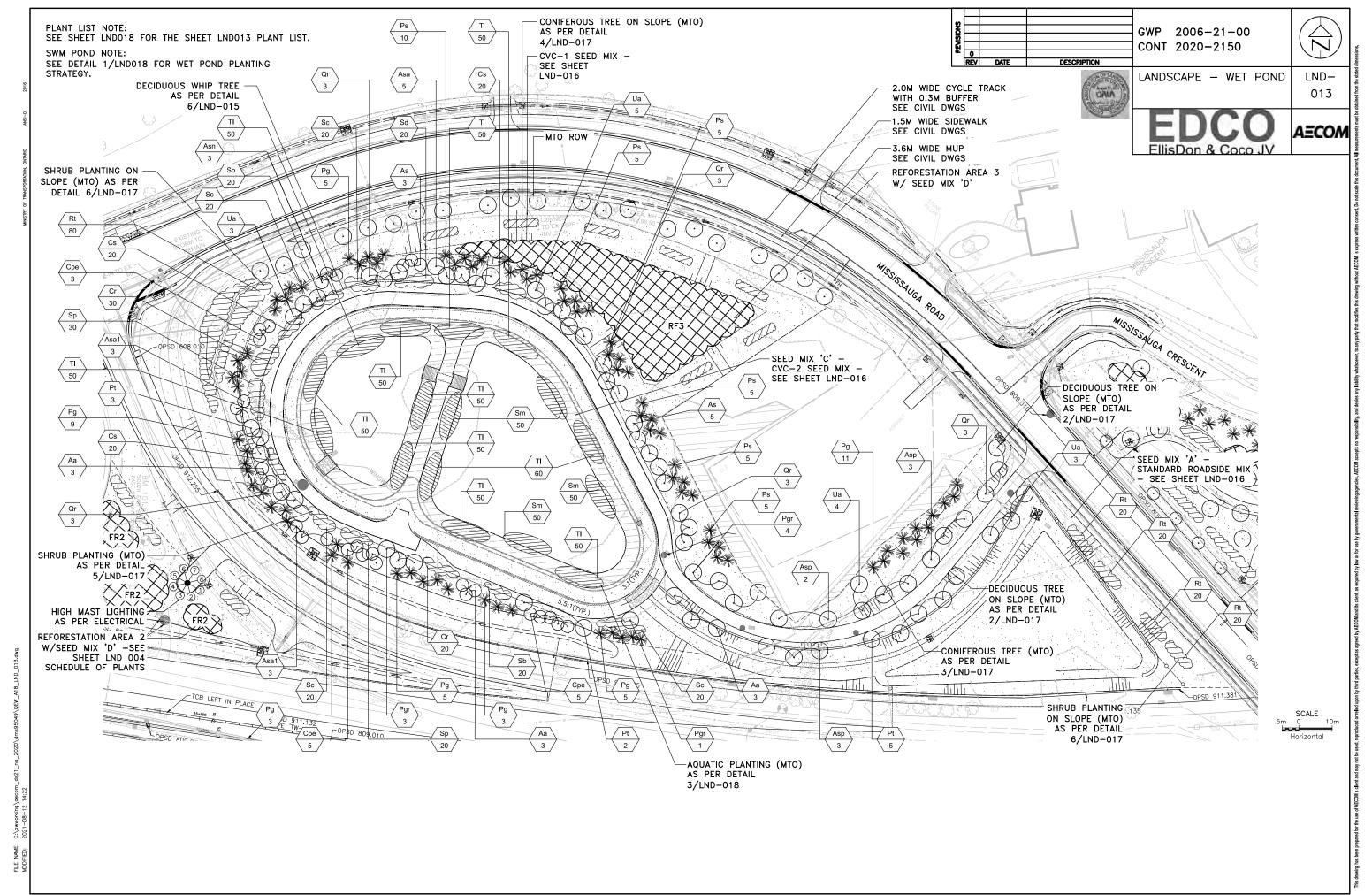
LND-012

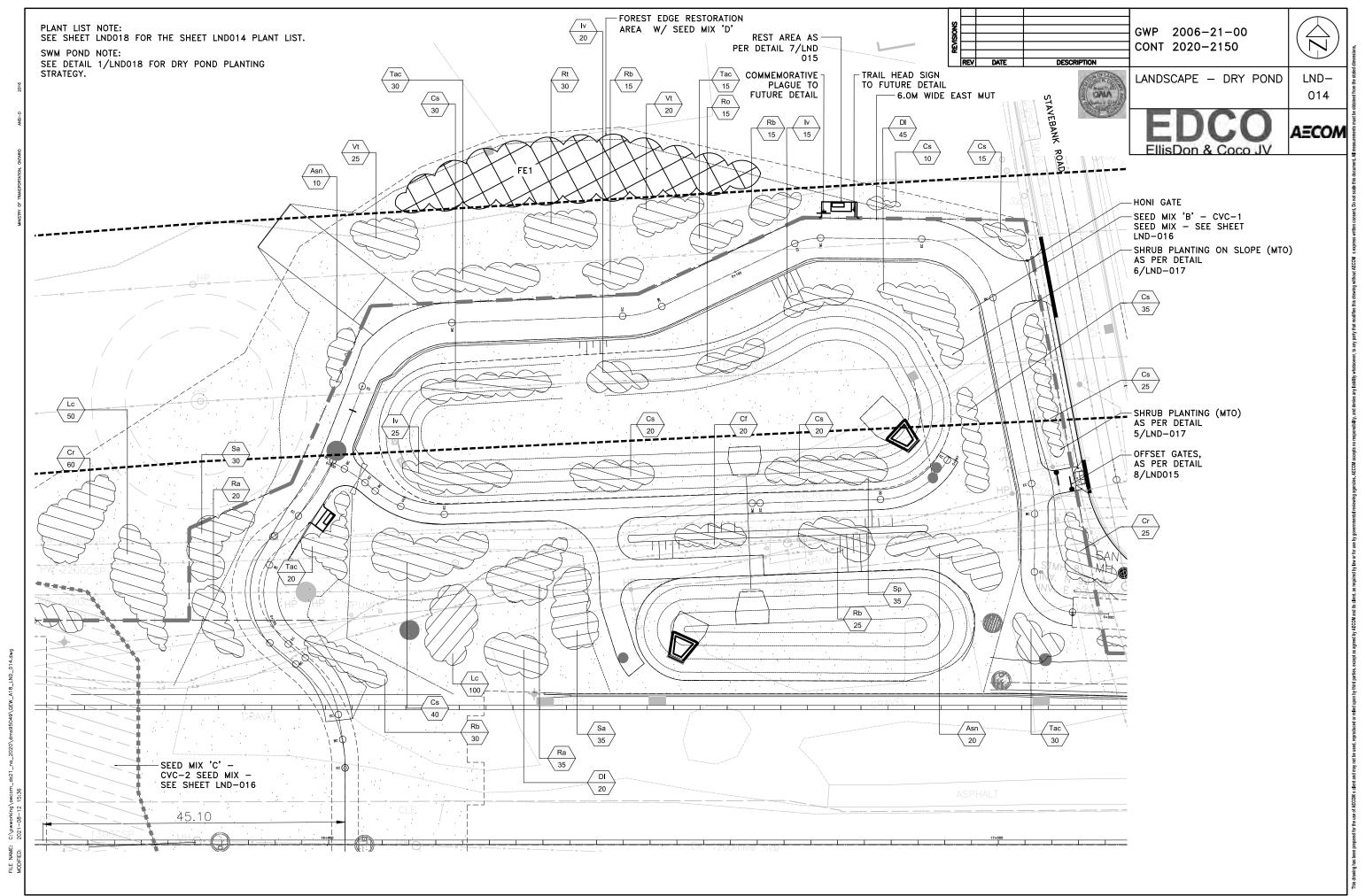
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FR5 QUANTITIES 1900 sq.m.	Botanical Name	Common Name	Size (cm)
Deciduous Tre	es		
23	Acer saccharinum	Silver Maple	175-200
23	Amelanchier arborea	Downy Serviceberry	175-200
23	Carya cordiformis	Bitternut Hickory	175-200
22	Juglans nīgra	Black Walnut	175-200
23	Populus grandidentata	Largetooth Aspen	175-200
Coniferous Tre	es		
23	Picea glauca	White Spruce	100-150
15	Pinus strobus	Eastern White Pine	100-150

FR7 QUANTITIES 1905 sq.m.	Botanical Name	Common Name	Size (cm)
Deciduous Tre	es		
23	Acer saccharinum	Silver Maple	175-200
23	Amelanchier arborea	Downy Serviceberry	175-200
23	Carya cordiformis	Bitternut Hickory	175-200
22	Juglans nigra	Black Walnut	175-200
23	Quercus rubra	Red Oak	175-200
Coniferous Tre	es		
23	Picea glauca	White Spruce	100-150
15	Pinus strobus	Eastern White Pine	100-150

FR8 QUANTITIES 290 sq.m.	Botanical Name	Common Name	Size (cm)
Deciduous Tre	es		
6	Acer saccharum	Sugar Maple	175-200
6	Populus deltoides	Cottonwood	175-200
6	Ulmus americana	American Elm	175-200
oniferous Tre	es		
4	Picea glauca	White Spruce	100-150
2	Pinus strobus	Eastern White Pine	100-150





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LANDSCAPE - DETAILS I

LND-015

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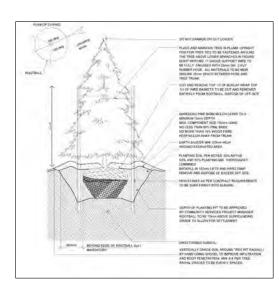


PRIVATE ONLY STOCK TO MAKE TO

DECIDUOUS TREE
(CITY OF MISSISSAUGA)

NTS

1
(X-XXXX)

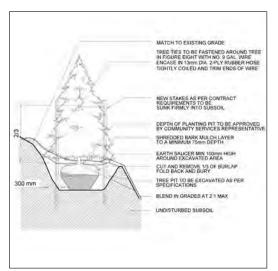


CONIFEROUS TREE
(CITY OF MISSISSAUGA)

NTS

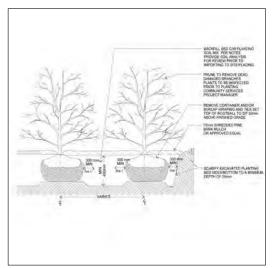
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X-XXXX



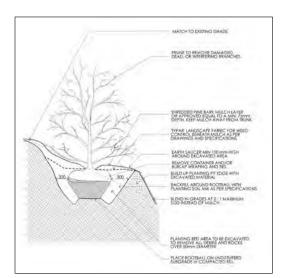
CONIFEROUS TREE ON SLOPE (CITY OF MISSISSAUGA)

NTS



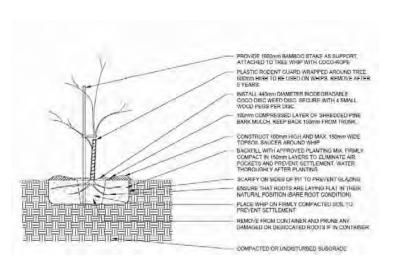
SHRUB PLANTING
(CITY OF MISSISSAUGA)
NTS

4
X-XXXX

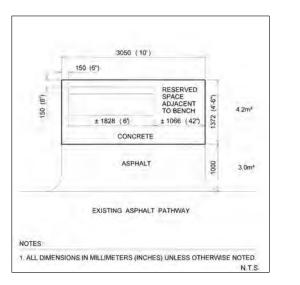


(5)

SHRUB PLANTING ON SLOPE (CITY OF MISSISSAUGA)



DECIDUOUS WHIP TREE



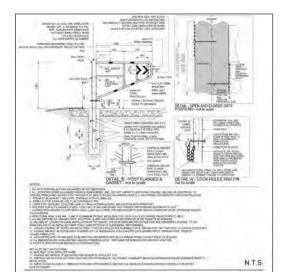
REST AREA

7

NTS

7

X-XXX



OFFSET GATES

NTS

8

X-XXXX

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NTS

Key	Botanical Name	Common Name	Size	Spacing	Condition
Deciduo	us Trees				
As	Acer saccharum	Sugar Maple	60mm cal.	10m o.c	WB
As1	Acer saccharum	Sugar Maple	2m ht.	3m o.c	B&B
Asa	Acer saccharinum	Silver Maple	60mm cal.	10m o.c	WB
Asa1	Acer saccharinum	Silver Maple	2m ht.	3m o.c	B&B
Aa	Amelanchier arborea	Downy Serviceberry	2m ht.	3m o.c.	B&B
Cc	Carya cordiformis	Bitternut Hickory	2m ht.	3m o.c.	B&B
Сре	Crataegus pedicellate	Scarlet Hawthorn	2m ht.	3m o.c.	B&B
Jri	Juglans nigra	Black Walnut	2m ht.	3m o.c.	8&B
Pgr	Populus grandidentata	Largetooth Aspen	2m ht.	3m o.c.	8&B
Pd	Populus deltoides	Cottonwood	2m ht.	3m o.c.	B&B
Pt	Populus tremuloides	Trembling Aspen	2m ht.	3m o.c.	B&B
Qr	Quercus rubra	Red Oak	60mm cal.	10m o.c.	WB
Qr1	Quercus rubra	Red Oak	2m ht,	3m o.c.	B&B
Tam	Tilia americana	Basswood	60mm cal.	10m o.c.	WB
Ua	Ulmus americana	American Elm	60mm cal.	10m o.c.	WB
Ua1	Ulmus americana	American Elm	2m ht.	3m o.c.	888
Conifer	ous Trees				
Pg	Picea glauca	White Spruce	1.5m ht.	4m o.c.	WB
Ps	Pinus strobus	Eastern White Pine	1.5m ht.	4m o.c.	WB
To	Thuja occidentalis	Eastern White Cedar	1.0m ht.	2.0m o.c.	B&B
Deciduo	us Shrubs				1
Asn	Amelanchier sanguinea	Roundleaf Serviceberry	1,0m ht.	2.0m o.c.	ст
Asp	Amelanchier spicata	Low Serviceberry	1,0m ht.	2.0m o.c.	ĊT
Am	Aronia melanocarpa	Black Chokeberry	600mm ht.	1,0m o.c.	CT
Cs	Cornus sericea	Red Osier Dogwood	600mm ht.	1.0m o.c.	CT
Cr	Cornus racemosa	Grey Dogwood	600mm ht.	2,0m o.c.	CT
DI	Dierilla lonicera	Bush Honeysuckle	600mm ht.	1.0m o.c.	CT
lv.	Ilex verticillata	Winterberry	600mm ht.	1.0m o.c.	CT
Lc	Lonicera canadensis	Dry Fly Honeysuckle	600mm ht.	1.0m o.c.	CT
Rt	Rhus typhina	Staghorn Sumac	600mm ht.	1.0m o.c.	CT
Ram	Ribes americanum	Wild Black Currant	600mm ht.	1.0m o.c.	CT
Rb	Rosa blanda	Meadow Rose	600mm ht.	1.0m o.c.	CT
Ra	Rubus allegheniensis	Allegheny Blackberry	600mm ht.	1.0m o.c.	CT
Ro	Rubus occidentalis	Black Raspberry	600mm ht.	1.0m o.c.	СТ
Rod	Rubus odoratus	Purple-Flowering Raspberry	600mm ht.	1.0m o.c.	ст
Sp	Salix petiolaris	Meadow Willow	600mm ht.	2.0m o.c.	CT
Sd	Salix discolor	Pussy Willow	600mm ht.	2.0m o.c.	СТ
Sb	Salix bebbiana	Bebb's Willow	600mm ht.	2.0m o.c.	CT
Sc	Sambucus canadensis	American Elder	600mm ht.	1.0m o.c.	CT
Sa	Spiraea alba	Meadowsweet	600mm ht.	1.0m o.c.	СТ
Va	Viburnum acerifolium	Maple-leaf Viburnum	600mm ht.	2.0m o.c.	CT
VI	Viburnum lentago	Nannyberry	600mm ht.	2.0m o.c.	ст
Vt	Viburnum trilobum	American Cranberry	600mm ht.	2.0m o.c.	CT
Conifero	us Shrubs				
Tac	Taxus canadensis	Canadian Yew	500mm ht.	1.0m o.c.	CT
Emerge	nt, Submeregent, & Floating				•
Sm	Scirpus microcarpus	Red-Tinged Bulrush	1 gal pot	0.6m o.c.	CT CT
TI.	Typha latifolia	Broad-leaf Cattail	1 gal pot	0.6m o.c.	CT
Vines	L'entre contraine	1	9-2632		1
- mica				,	

Climbing Bittersweet

1 gal pot

1.0m o.c.

CT

Botanical Name	Common Name	% of Mix
Festuca rubra	Creeping Red Fescue	52%
Poa pratensis	Kentucky Bluegrass	10%
Lolium perrenne	Perennial Ryegrass	35%
Trifolium repens	White Clover	3%

SEEDING RATE: 22-25KG/HA

NURSE CROP: COMMON OATS (Avena sativa) 22KG/HA

Botanical Name	Common Name	% of Mix
Anemone canadensis	Canada Anemone	1%
Asclepías syriaca	Common Milkweed	2%
Carex granularis	Limestone Meadow Sedge	15%
Elymus virginicus var. virginicus	Virginia Wildrye	40%
Euthamia graminifolia	Grass-leaved Goldenrod	1%
Monarda fistulosa var. fistulosa	Wild Bergamot	1%
Oenothera biennis	Common Evening Primrose	25%
Rudbeckia hirta	Black Eyed Susan	10%
Solidago canadensis var. canadensis	Canada Goldenrod	1%
Solidago juncea	Early Goldenrod	1%
Solidago nemoralis ssp. nemoralis	Gray-stemmed Goldenrod	1%
Symphyotrichum novae-angliae	New England Aster	1%
Verbena urticifolia	White Vervain	1%

SEEDING RATE: 22-25KG/HA

NURSE CROP: COMMON DATS (Avena sativa) 22KG/HA

Botanical Name	Common Name	% of Mix
Carex vulpinoidea	Fox Sedge	25%
Elymus virginicus var. virginicus	Virginia Wildrye	35%
Juncus tenuis	Path Rush	5%
Poa palustris	Fowl Bluegrass	25%
Scirpus atrovirens	Dark-green Bulrush	5%
Verbena hastata	Blue Vervain	5%

SEEDING RATE: 22-25KG/HA

NURSE CROP: COMMON OATS (Avena sativa) 22KG/HA

Botanical Name	Common Name	% of Mix
Poa palustris	Fowl Bluegrass	50%
Desmodium canadensis	Showy Tick Trefail	30%
Penstemon digitalis	Foxglove Beardtongue	10%
Geum canadense	White Avens	5%
Eutrochium maculatum	Spotted Joe Pyeweed	2%
Carex bebbii	Bebbs Sedge	1%
Carex crinite	Nodding Fringed Sedge	1%
Glyceria striata	Fowl Manna Grass	1%

SEEDING RATE: 22-25KG/HA

NURSE CROP: COMMON OATS (Avena sativa) 22KG/HA



GWP 2006-21-00 CONT 2020-2150



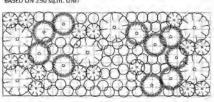
LND-

016

LANDSCAPE-PLANT LISTS

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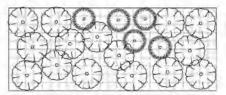
FOREST EDGE RESTORATION PLANTING BASED ON 250 sq.m. UNIT



PLANTING TYPE	SIZE REQUIREMENTS CM	QUANTITY PER UNIT
DECTOWOUS TREES	175-200	.0
CONFEROLS TREES	180-156	10.
WHIP DECIDIOUS TREES	80-125	16
SHRUBS	50-60	58

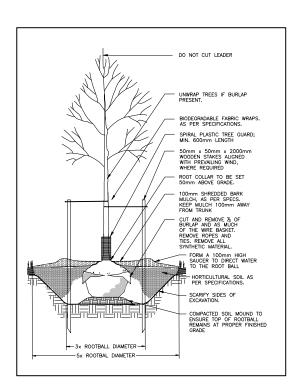
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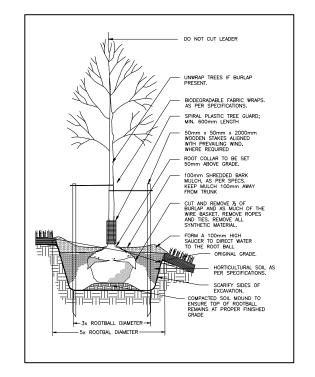
FOREST RESTORATION PLANTING BASED ON 250 sq.m. UNIT

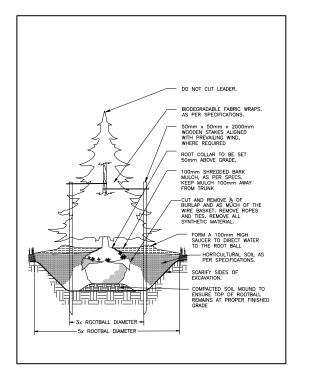


PLANTING TYPE	REQUIREMENTS OTT	QUANTITY PER UNIT
DECIDIADUS TREES	175-200	15
CONFERENCES TORES	100-150	- 6

Celestrus scandens









LND-

GWP 2006-21-00 CONT 2020-2150

12ALA

LANDSCAPE - DETAILS II

DECIDUOUS TREE (MTO)

NTS

1

X-XXXX

DECIDUOUS TREE ON SLOPE (MTO)
NTS

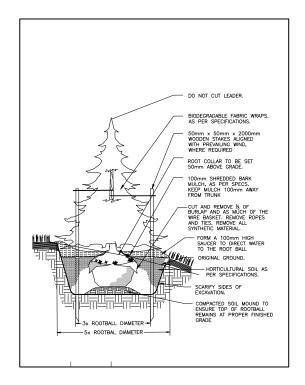
2 X-XXXX

CONIFEROUS TREE (MTO)

NTS

3

X-XXXX



ROOT CROWN TO BE SET
25mm ABOVE EXISTING
GRADE.

REMOVE CONTAINER AND SUIT
ROOTBALL VERTICALLY 3 TIMES
EVENLY AROUND THE CIRCUMFERENCE
TO 13MM DEPTH.

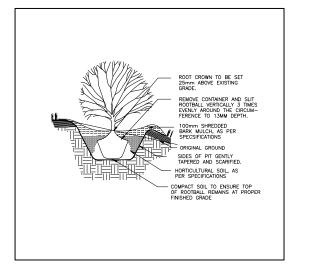
TO 13MM DEPTH.

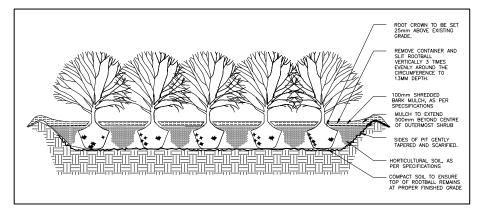
TO 13MM DEPTH.

SIDES OF PIT GENTLY
TAPERED AND SCARFIED.

HORRICULTURAL SOIL, AS
PER SPECIFICATIONS

COMPACT SOIL TO ENSURE TOP
OF ROOTBALL REMAINS AT PROPER
FINISHED GRADE





CONIFEROUS TREE ON SLOPE (MTO)

NTS

4

X-XXXX

SHRUB PLANTING (MTO)

NTS

5 X-XXX SHRUB PLANTING ON SLOPE (MTO)

NTS

6 X-XXXX SHRUB PLANTING BED (MTO)

NTS

7 X-XXXX

NTS