

Attachment B

Supplemental Scope of Services

Contractor Note: This is broken into four different sections, which largely have identical language. In areas where the language differs the text has been bolded and underlined to help the contractor see where services differ.

Section 1: Victory Crossing

Commerce City Right Of Way Landscape Maintenance Scope of Service

A. Scope:

- (i) **Services:** This section shall serve as the reference for programmatic services for Victory Crossing. The Contractor shall also provide non-programmatic services as authorized by the Department of Parks, Recreation & Golf and agreed to by the Contractor. Such non-programmatic, ad hoc services are never part of programmed, routine maintenance. All ad hoc services will follow the Work Order process as outlined in the Agreement.
- (ii) **Communication:** The Contractor will provide the City with a reasonable and professional level of communication. The City will provide a shared web based Agronomic Calendar with scheduled services and areas for ad hoc services. The Contractor will communicate within reasonable windows when the contractor will provide programmed services and the Contractor will provide the City with the exact dates of its programmed services, with details, in the provided Agronomic Calendar. Additionally the Contractor shall provide the City with detailed information on completed services for programmed and ad hoc services, within the provided detail sections of the Agronomic Calendar.

B. Turf Maintenance:

- (i) **Mowing:** Turf areas shall be mowed 26 times between April and October. Mowing frequencies shall follow the pattern laid out in the Victory Crossing Agronomic Calendar. Mowing frequencies can and will be adjusted, based upon short and long term weather variations. It is understood that mowing will take place on specific dates when conditions allow. Mowing height will be based upon turf variety and season, meeting the horticultural best practices for such turf varieties. Turf clippings shall be mulched and not caught or removed from turf areas unless they are lying in clumps which could damage the turf or other landscaping. The City reserves the right to identify clippings as excessive at its sole discretion.

- (ii) Trimming: String trimming shall occur with the 26 scheduled mowings between April and October to be determined and approved by the City. Utility cabinets, lights, sign poles and other objects shall be trimmed around to assure a neat and attractive appearance at the time of each mowing.
- (iii) Edging: All turf areas adjacent to sidewalks or other hardscapes shall be edged 7 times, at a minimum, as specified in the Agronomic Calendar. Waste from edging shall be bagged and removed from the site in order to maintain the broom swept appearance which is the minimum expectation for how a site should look after service.
- (iv) Post-emergent weed control: Turf areas shall be kept free of weeds by the use of a chemical herbicide to promote a healthy appearance.
- (v) Disease control: The Contractor may diagnose and propose treatment of diseased turf areas on an ad hoc basis, to be determined and approved by the City.
- (vi) Backpack blowing: Blowing shall occur at the time of each mowing. Sidewalks, curb and gutters and other hardscapes shall be blown and kept clean of grass clippings and other debris with the use of power-operated blowers.
- (vii) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (viii) Fertilization: Turf areas shall be fertilized as warranted by soil sampling and analysis, with a commercial fertilizer as approved by the City two times a year, in accordance with the Agronomic Calendar. The Contractor must provide the City with fertilizer mixture and application rates.
- (ix) Aeration: Core aeration shall be performed once a year in accordance with the Agronomic Calendar, with a walk behind and/or a tow behind aerator. Aeration plugs shall be left and not caught or removed from the turf areas.

C. Shrub and Bed Maintenance:

- (i) Trimming and pruning: Shrub pruning shall occur twice a year as specified in the Agronomic Calendar. The fall pruning shall only include shrubs that are blocking lines of sight or the right of way. Late winter/early spring pruning shall include ornamental grasses and any shrubs or perennials that have been determined to need pruning. The annual pruning of shrubs should be done to maintain growth within space limitations, and it will vary depending upon the species. Perennial dead heading will be done on an as needed basis throughout the year. Pruning necessitated by storm damage, disease, neglected overgrowth and winterkill will occur on an as needed basis as part of the routine maintenance of the shrub and bed areas. None of the shrubs in the contract area need to be cut into artificial box, square, ball or other fancy shapes. All pruning will be done on a species and site specific basis, under the direction and approval of the City.

- (ii) Weed and spot control: The shrub beds and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds, at the discretion of the City. Spot weed control will occur in the shrub and bed areas according to the Agronomic Calendar for a total of 12 times a year.
- (iii) Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best management practices, to the shrub beds, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic Calendar.
- (iv) Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds when they are rosettes and with manual removal if they are bolting. Manually removed weeds shall be removed from the site. At no time will bolted weeds be left in the shrub or bed areas. Post-emergent weed control shall occur twice a year as specified in the Agronomic Calendar..
- (v) Disease control: The Contractor may diagnose and treat diseased shrubs on an ad hoc basis, to be determined and approved by the City.
- (vi) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis, to be determined and approved by the City.
- (vii) Additional Mulch: The Contractor may be tasked with providing additional mulch for the shrub and bed areas on an ad hoc basis, to be determined and approved by the City.

D. Tree Maintenance:

- (i) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (ii) Trimming up to 10': Once a year programmed trimming shall occur. Low hanging branches above walkways, drive lanes and high use turf areas that present a hazard to pedestrians, vehicles and park users will be pruned to a safe height not to exceed 10 feet. Volunteers and suckers will also be removed. It is incorporated into this scope of service, and the bid price, that routine trimming of broken and/or hazardous branches will be trimmed upon discovery by the Contractor or at the direction of the City.
- (iii) Tree rings: Tree rings will be chemically treated six times a year in accordance with the Agronomic Calendar to control weeds and grass adjacent to tree trunks. A safe buffer will be maintained to protect trees from damage.

E. Native Grass Areas:

- i. **The native grass areas will have monthly mowing/trimmings from May thru October. The native grass areas consist of three distinct service areas.**
 - a. **Tree lawns - the areas between the sidewalk and Quebec Parkway and the native grass nodes along Quebec Street.**
 - b. **Beauty bands - a 24" band around all other parts of the native grass area.**

- c. **Berms - an elevated section in the native grass area between 64th and 72nd along Quebec Parkway.**

In the pursuit of clarity, a detail of how the sections are maintained is below.

The tree lawn/beauty bands/berms mowing will consist of mowing the native grass areas to a height of 4"-5", this is to include the tree lawns, native grass nodes along Quebec Street, beauty bands and the berms. Native grass clippings shall be mulched and not caught or removed from native grass areas unless they are lying in clumps which could damage the native grass or other landscaping. Clumps shall be bagged and removed from the site. The City reserves the right to identify clippings as excessive at its sole discretion.

- ii. A backpack blower, or substitute item, will be used to ensure that the sidewalks are in a neat and clean condition after the trimming. **In May and August the Contractor shall mow the tree lawns and the beauty band areas, in accordance with the Agronomic Calendar. In June and October the Contractor will mow the entire native grass area, to include the tree lawn, beauty bands and berms, in accordance with the Agronomic Calendar. The June Mowing must occur during the last week of June.**
- iii. Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best managerial practices, to the native grass areas, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic calendar.
- iv. Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds in a broadband application. Post-emergent weed control shall occur twice a year as specified in the Agronomic calendar
- v. Weed and spot control: The native grass areas and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds at the sole discretion of the City. The Contractor is expected to treat rosettes with spot herbicides and with manual extraction if they are bolting. Pulled weeds shall be removed from the site. At no time will bolted weeds be left in the native grass areas. Weed and spot control will occur in the native grass areas according to the Agronomic Calendar for a total of 12 times a year.
- vi. Edging: The native grass areas will be edged once a year, as laid out in the agronomic calendar. During the dates where edging occurs the same standards for the appearance of the hardscapes after the service will apply. The edging must occur during the last mowing/trimming of the month.

F. System Wide Maintenance

- i. Spring clean up: As specified in the Agronomic calendar, the Contractor shall perform Spring clean up once a year. This service shall include the removal of debris from the

turf, shrub beds and mulched areas. The Contractor should use whatever equipment is necessary to maintain a neat appearance in the contract areas.

- ii. Fall clean up (leaf removal): Fall clean up shall occur twice a year as specified in the Agronomic calendar. The Contractor shall ensure that all leaves and other debris are removed from the contract area to ensure a neat appearance.
- iii. Litter removal:
 - a. April thru October, all turf areas will be inspected for debris and trash before mowing. The debris and trash shall be removed from the contract area. In the shrub bed areas and the native grass areas, debris and trash shall be removed before any mowing takes place. In non-mowed areas, such as shrub beds and native grass areas on non-service weeks, litter and debris removal shall occur at a minimum of every other week, to coincide with spot weed control in those areas, in accordance with the Agronomic Calendar.
 - b. November thru March, litter and debris removal shall occur every other week in accordance with the Agronomic Calendar.

G. Irrigation

- i. Spring charge up and activation: The Contractor shall perform the charge up and activation of the irrigation system. The system charge up shall include, but not be limited to, installing backflows at each of the controller areas (5 back flows which are kept in storage during non-irrigation months with the City), all back flows are currently reduced pressure, adjustable angle, bolt on, bolt off design. The Contractor shall insure that the system is fully functioning to include system operation checks on the full operational capacity, functionality and necessary adjustments of each controller, master valve, flow sensor, solenoid valve, head, emitter, bubbler, etc.
- ii. Irrigation monitoring & iCentral utilization: On a routine basis, but not less than weekly, from May thru September the Contractor shall monitor each irrigation controller via the iCentral system to ensure that it meets the minimum operating requirements of the City. iCentral is a web based irrigation monitoring system operated by Rain Master Control Systems. Each controller must be able to be monitored with the iCentral system, operate its programs with automated EvapoTranspiration adjustments and utilize flow sensors and master valves to regulate, monitor and generate automated system alarms and reports.
- iii. System checks: The Contractor shall perform monthly irrigation system checks six times in accordance with the Agronomic Calendar. System checks shall include the visual inspection of each zones operation in order to ensure that there are no malfunctions and verify flow sensor and master valve functionality. Routine irrigation adjustments, such as adjusting sprinkler heads for coverage, are considered routine maintenance and are incorporated into this scope of service, they will not be billed to the City. All repairs and replacements must have written approval from the City, e-mail and text communications

shall suffice as approval. Repairs under \$500 may be completed without a work order, repairs over \$500 must have an accompanying work order executed prior to the performance of work.

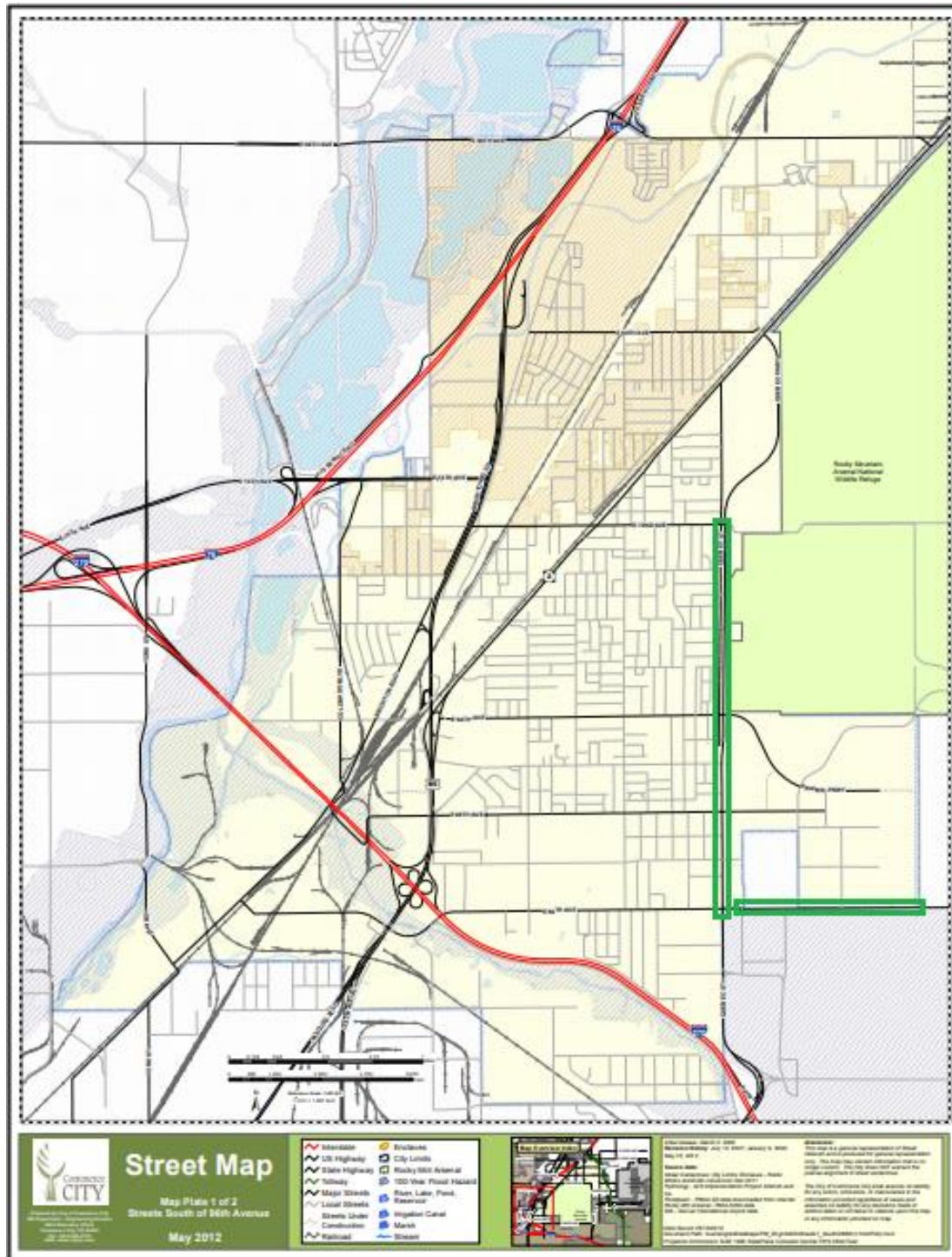
- iv. Water use: In an effort to conserve water resources and ensure prudent use of the City's budget, water conservation efforts will be required on the behalf of the Contractor. These efforts shall include but are not limited to; conservative irrigation runtimes and start times, the use of ET (EvapoTranspiration) scheduling, water usage reporting, and potential water budget/consumption limitations or restrictions. The City and the Contractor will communicate routinely on water usage.
- v. System winterization: The Contractor shall perform the seasonal winterization of the irrigation system once a year in accordance with the Agronomic calendar. The irrigation system will be drained of water and it will have forced air injected into the lines to clear all water from the lines, valves, heads & fittings (the flow sensor must be removed before this is done to prevent damage). All backflows must be tagged, removed and provided to the City for winter storage. Backflows must be removed from the field at the time that the system is drained to prevent theft. The Contractor will be responsible for the replacement of any backflow theft or loss after winterization has occurred.

2019 Agronomic Calendar for Victory Crossing

Turf Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Mow					2	5	4	5	4	4	2			26
Trimming					2	5	4	5	4	4	2			26
Backpack blowing					2	5	4	5	4	4	2			26
Edging					1	1	1	1	1	1	1			7
Post-emergent weed control					1			1						2
Disease control	X													0
Insect control	X													0
Fertilizer (i)					1					1				2
Aeration					1									1
Shrub and Bed Maint.	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Trimming and pruning				1						1				2
Weed/Spot control					1	2	2	2	2	2	1			12
Trimming Ravenna			1											1
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Disease control (iii)	X													0
Insect control (iii)	X													0
Add mulch (iv)	X													0
Tree Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Insect control	X													0
Trimming up to 10'	X							1						1
Tree rings					1	1	1	1	1	1				6
Native Grass Areas	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Tree lawns (vi)						1	1	1	1	1	1			6
Beauty bands (24")						1			1					2
Berms (vi)							1				1			2
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Weed/Spot control	X				1	2	2	2	2	2	1			12
Edging (v)							1							1
System Wide Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring clean up				1										1
Fall clean up (leaf removal)											1	1		2
Litter Removal	X	2	2	2	2	2	2	2	2	2	2	2	2	24
Irrigation	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring charge up and activation					1									1
System checks						1	1	1	1	1	1			6
Monitoring						5	4	5	4	4				22
System winterization											1			1

(i) All fertilizations of turf grass must have at least 1 lb of nitrogen per 1000 square feet. The Contractor must provide details of the exact make up and intensity of each application. (ii) All pre-emergent and post emergent weed controls will use a broadcast broadleaf application, to include the adjoining hardscapes and vacant bedding areas. (iii) Hourly Rates. (iv) Per 1000 sq feet 3 inch lift. (v) Must occur during the last mowing/trimming of the month. (vi) June Tree Lawns and Berm mowing must be done during the last week of June. October Tree Lawns and Berm mowing must be done during last week October-first week November.

Total Number of Backflows: 5



Victory Crossing Beauty Bands Detail Sheets

The beauty bands are approximately 24" swaths that need to be mown in July and September, an example is in the photo from below:

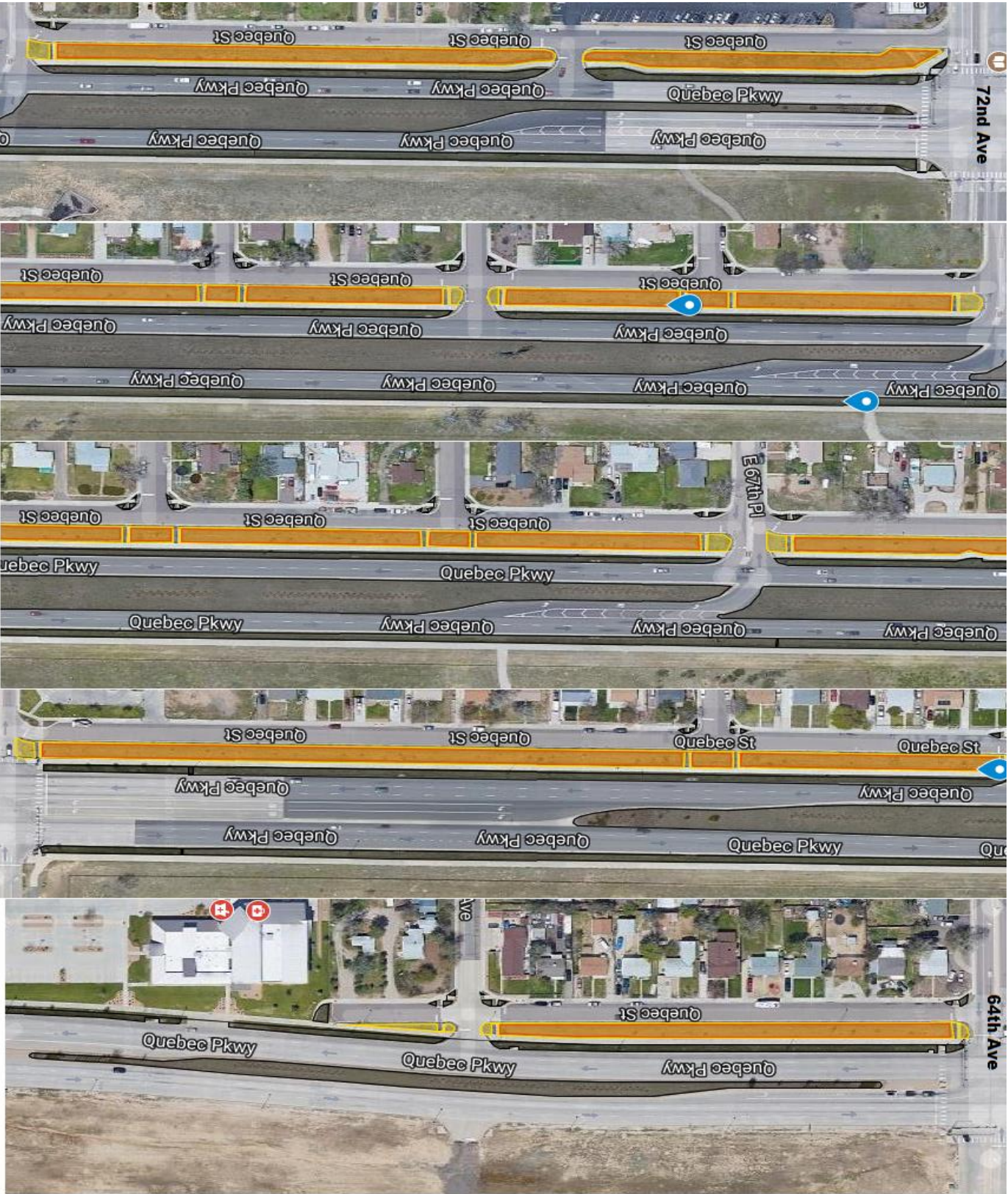


In June the entire site needs to be completely mowed to a level as high as your mower decks will allow (4" or more). Exhibit B outlines the pattern of beauty bands and full mows throughout the growing season. During the full mows, the contractor is encouraged to mulch all the plant material onsite.

On the next page are maps of the native grass areas in greater detail.

To get a sense of the size of this area, 72nd and 64th Avenues are labeled.

The yellow areas are the beauty bands. The orange areas are the raised berm areas.



Section 2: US 85 & Hwy 2

Commerce City Right Of Way Landscape Maintenance Scope of Service

A. Scope:

- (i) **Services:** This Section shall serve as the reference for programmatic services for US 85 and Highway 2. The Contractor shall also provide non-programmatic services for this area as authorized by the Department of Parks, Recreation & Golf and agreed to by the Contractor. Such non-programmatic, ad hoc services are never part of programmed, routine maintenance. All ad hoc services will follow the Work Order process as outlined in the Agreement.
- (ii) **Communication:** The Contractor will provide the City with a reasonable and professional level of communication. The City will provide a shared web based Agronomic Calendar with scheduled services and areas for ad hoc services. The Contractor will communicate within reasonable windows when the contractor will provide programmed services and the Contractor will provide the City with the exact dates of its programmed services, with details, in the provided Agronomic Calendar. Additionally the Contractor shall provide the City with detailed information on completed services for programmed and ad hoc services, within the provided detail sections of the Agronomic Calendar.

B. Turf Maintenance:

- (i) **Mowing:** Turf areas shall be mowed 26 times between April and October as approved and directed by the City. Mowing frequencies shall follow the pattern laid out in the US 85 & Hwy 2 Agronomic Calendar. Mowing frequencies can and will be adjusted, based upon short and long term weather variations. It is understood that mowing will take place on specific dates when conditions allow. Mowing height will be based upon turf variety and season, meeting the horticultural best practices for such turf varieties. Turf clippings shall be mulched and not caught or removed from turf areas unless they are lying in clumps which could damage the turf or other landscaping. The City reserves the right to identify clippings as excessive at its sole discretion.
- (ii) **Trimming:** String trimming shall occur with the 26 scheduled mowings between April and October to be determined and approved by the City. Utility cabinets, lights, sign poles and other objects shall be trimmed around to assure a neat and attractive appearance at the time of each mowing.
- (iii) **Edging:** All turf areas adjacent to sidewalks or other hardscapes shall be edged 7 times, at a minimum, as specified in the Agronomic Calendar. Waste from edging shall be bagged and removed from the site in order to maintain the broom swept appearance which is the minimum expectation for how a site should look after service.

- (iv) Post-emergent weed control: Turf areas shall be kept free of weeds by the use of a chemical herbicide to promote a healthy appearance.
- (v) Disease control: The Contractor may diagnose and propose treatment of diseased turf areas on an ad hoc basis, to be determined and approved by the City.
- (vi) Backpack blowing: Blowing shall occur at the time of each mowing. Sidewalks, curb and gutters and other hardscapes shall be blown and kept clean of grass clippings and other debris with the use of power-operated blowers.
- (vii) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (viii) Fertilization: Turf areas shall be fertilized as warranted by soil sampling and analysis, with a commercial fertilizer as approved by the City two times a year, in accordance with the Agronomic Calendar. The Contractor must provide the City with fertilizer mixture and application rates.
- (ix) Aeration: Core aeration shall be performed once a year in accordance with the Agronomic Calendar, with a walk behind and/or a tow behind aerator. Aeration plugs shall be left and not caught or removed from the turf areas.

C. Shrub and Bed Maintenance:

- (i) Trimming and pruning: Shrub pruning shall occur twice a year as specified in the Agronomic Calendar. The fall pruning shall only include shrubs that are blocking lines of sight or the right of way. Late winter/early spring pruning shall include ornamental grasses and any shrubs or perennials that have been determined to need pruning. The annual pruning of shrubs should be done to maintain growth within space limitations, and it will vary depending upon the species. Perennial dead heading will be done on an as needed basis throughout the year. Pruning necessitated by storm damage, disease, neglected overgrowth and winterkill will occur on an as needed basis as part of the routine maintenance of the shrub and bed areas. None of the shrubs in the contract area need to be cut into artificial box, square, ball or other fancy shapes. All pruning will be done on a species and site specific basis, under the direction and approval of the City.
- (ii) Weed and spot control: The shrub beds and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds, at the discretion of the City. Spot weed control will occur in the shrub and bed areas according to the Agronomic Calendar for a total of 12 times a year.
- (iii) Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best management practices, to the shrub beds, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic Calendar.

- (iv) Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds when they are rosettes and with manual removal if they are bolting. Manually removed weeds shall be removed from the site. At no time will bolted weeds be left in the shrub or bed areas. Post-emergent weed control shall occur twice a year as specified in the Agronomic Calendar.
- (v) Disease control: The Contractor may diagnose and treat diseased shrubs on an ad hoc basis, to be determined and approved by the City.
- (vi) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis, to be determined and approved by the City.
- (vii) Additional Mulch: The Contractor may be tasked with providing additional mulch for the shrub and bed areas on an ad hoc basis, to be determined and approved by the City.

D. Tree Maintenance:

- (iv) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (v) Trimming up to 10': Once a year programmed trimming shall occur. Low hanging branches above walkways, drive lanes and high use turf areas that present a hazard to pedestrians, vehicles and park users will be pruned to a safe height not to exceed 10 feet. Volunteers and suckers will also be removed. It is incorporated into this scope of service, and the bid price, that routine trimming of broken and/or hazardous branches will be trimmed upon discovery by the Contractor or at the direction of the City.
- (vi) Tree rings: Tree rings will be chemically treated six times a year in accordance with the Agronomic Calendar to control weeds and grass adjacent to tree trunks. A safe buffer will be maintained to protect trees from damage.

E. Native Grass Areas:

- i. **US 85 & Hwy 2: The native grass in this area borders the east side of Hwy 2 from Colorado Blvd and 52nd Ave to the bridge. This section is .689 acres and it needs to be mowed twice a year, as specified in the agronomic calendar for US 85 & Hwy 2. The contractor is only responsible for mowing the western portion of this median as depicted in the shared Google ROW Contract Area Map of the native grass area, approximately running north to south from the backflow.**

Native grass clippings shall be mulched and not caught or removed from native grass areas unless they are lying in clumps which could damage the native grass or other landscaping. Clumps shall be bagged and removed from the site. The City reserves the right to identify clippings as excessive at its sole discretion.

- ii. A backpack blower, or substitute item, will be used to ensure that the sidewalks are in a neat and clean condition after the trimming.

- iii. Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best managerial practices, to the native grass areas, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic calendar.
- iv. Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds in a broadband application. Post-emergent weed control shall occur twice a year as specified in the Agronomic calendar.
- v. Weed and spot control: The native grass areas and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds at the sole discretion of the City. The Contractor is expected to treat rosettes with spot herbicides and with manual extraction if they are bolting. Pulled weeds shall be removed from the site. At no time will bolted weeds be left in the native grass areas. Weed and spot control will occur in the native grass areas according to the Agronomic Calendar for a total of 12 times a year.
- vi. Edging: The native grass areas will be edged once a year, as laid out in the agronomic calendar. During the dates where edging occurs the same standards for the appearance of the hardscapes after the service will apply. The edging must occur during the last mowing/trimming of the month.

F. System Wide Maintenance

- i. Spring clean up: As specified in the Agronomic calendar, the Contractor shall perform Spring clean up once a year. This service shall include the removal of debris from the turf, shrub beds and mulched areas. The Contractor should use whatever equipment is necessary to maintain a neat appearance in the contract areas.
- ii. Fall clean up (leaf removal): Fall clean up shall occur twice a year as specified in the Agronomic calendar. The Contractor shall ensure that all leaves and other debris are removed from the contract area to ensure a neat appearance.
- iii. Litter removal:
 - a. April thru October, all turf areas will be inspected for debris and trash before mowing. The debris and trash shall be removed from the contract area. In the shrub bed areas and the native grass areas, debris and trash shall be removed before any mowing takes place. In non-mowed areas, such as shrub beds and native grass areas on non-service weeks, litter and debris removal shall occur at a minimum of every other week, to coincide with spot weed control in those areas, in accordance with the Agronomic Calendar. .
 - b. November thru March, litter and debris removal shall occur every other week in accordance with the Agronomic Calendar.

G. Irrigation

- i. Spring charge up and activation: The Contractor shall perform the charge up and activation of the irrigation system. The system charge up shall include, but not be limited to, installing backflows at each of the controller areas (**11** back flows which are kept in storage during non-irrigation months with the City), all back flows are currently reduced pressure, adjustable angle, bolt on, bolt off design. The Contractor shall insure that the system is fully functioning to include system operation checks on the full operational capacity, functionality and necessary adjustments of each controller, master valve, flow sensor, solenoid valve, head, emitter, bubbler, etc.
- ii. Irrigation monitoring & iCentral utilization: On a routine basis, but not less than weekly, from May thru September the Contractor shall monitor each irrigation controller via the iCentral system to ensure that it meets the minimum operating requirements of the City. iCentral is a web based irrigation monitoring system operated by Rain Master Control Systems. Each controller must be able to be monitored with the iCentral system, operate its programs with automated EvapoTranspiration adjustments and utilize flow sensors and master valves to regulate, monitor and generate automated system alarms and reports.
- iii. System checks: The Contractor shall perform monthly irrigation system checks six times in accordance with the Agronomic Calendar. System checks shall include the visual inspection of each zones operation in order to ensure that there are no malfunctions and verify flow sensor and master valve functionality. Routine irrigation adjustments, such as adjusting sprinkler heads for coverage, are considered routine maintenance and are incorporated into this scope of service, they will not be billed to the City. All repairs and replacements must have written approval from the City, e-mail and text communications shall suffice as approval. Repairs under \$500 may be completed without a work order, repairs over \$500 must have an accompanying work order executed prior to the performance of work.
- iv. Water use: In an effort to conserve water resources and ensure prudential use of the City's budget, water conservation efforts will be required on the behalf of the Contractor. These efforts shall include but are not limited to; conservative irrigation runtimes and start times, the use of ET (EvapoTranspiration) scheduling, water usage reporting, and potential water budget/consumption limitations or restrictions. The City and the Contractor will communicate routinely on water usage.
- v. System winterization: The Contractor shall perform the seasonal winterization of the irrigation system once a year in accordance with the Agronomic calendar. The irrigation system will be drained of water and it will have forced air injected into the lines to clear all water from the lines, valves, heads & fittings (the flow sensor must be removed before this is done to prevent damage). All backflows must be tagged, removed and provided to the City for winter storage. Backflows must be removed from the field at the time that the system is drained to prevent theft. The Contractor will be responsible for the replacement of any backflow theft or loss after winterization has occurred.

2019 Agronomic Calendar for US 85 & Hwy 2														
Turf Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Mow					2	5	4	5	4	4	2			26
Trimming					2	5	4	5	4	4	2			26
Backpack blowing					2	5	4	5	4	4	2			26
Edging					1	1	1	1	1	1	1			7
Post-emergent weed control					1			1						2
Disease control	X													0
Insect control	X													0
Fertilizer (i)					1					1				2
Aeration					1									1
Shrub and Bed Maint.	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Trimming and pruning				1						1				2
Weed/Spot control					1	2	2	2	2	2	1			12
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Disease control (iii)	X													0
Insect control (iii)	X													0
Add mulch (iv)	X													0
Tree Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Insect control	X													0
Trimming up to 10'	X							1						1
Tree rings					1	1	1	1	1	1				6
Native Grass Areas	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
East Side Hwy 85 52nd to bridge (.689 Acres)							1				1			2
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Weed/Spot control	X				1	2	2	2	2	2	1			12
Edging (v)							1							1
System Wide Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring clean up				1										1
Fall clean up (leaf removal)											1	1		2
Litter Removal	X	2	2	2	2	2	2	2	2	2	2	2	2	24
Irrigation	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring charge up and activation					1									1
System checks						1	1	1	1	1	1			6
Monitoring						5	4	4	5	4				22
System winterization											1			1

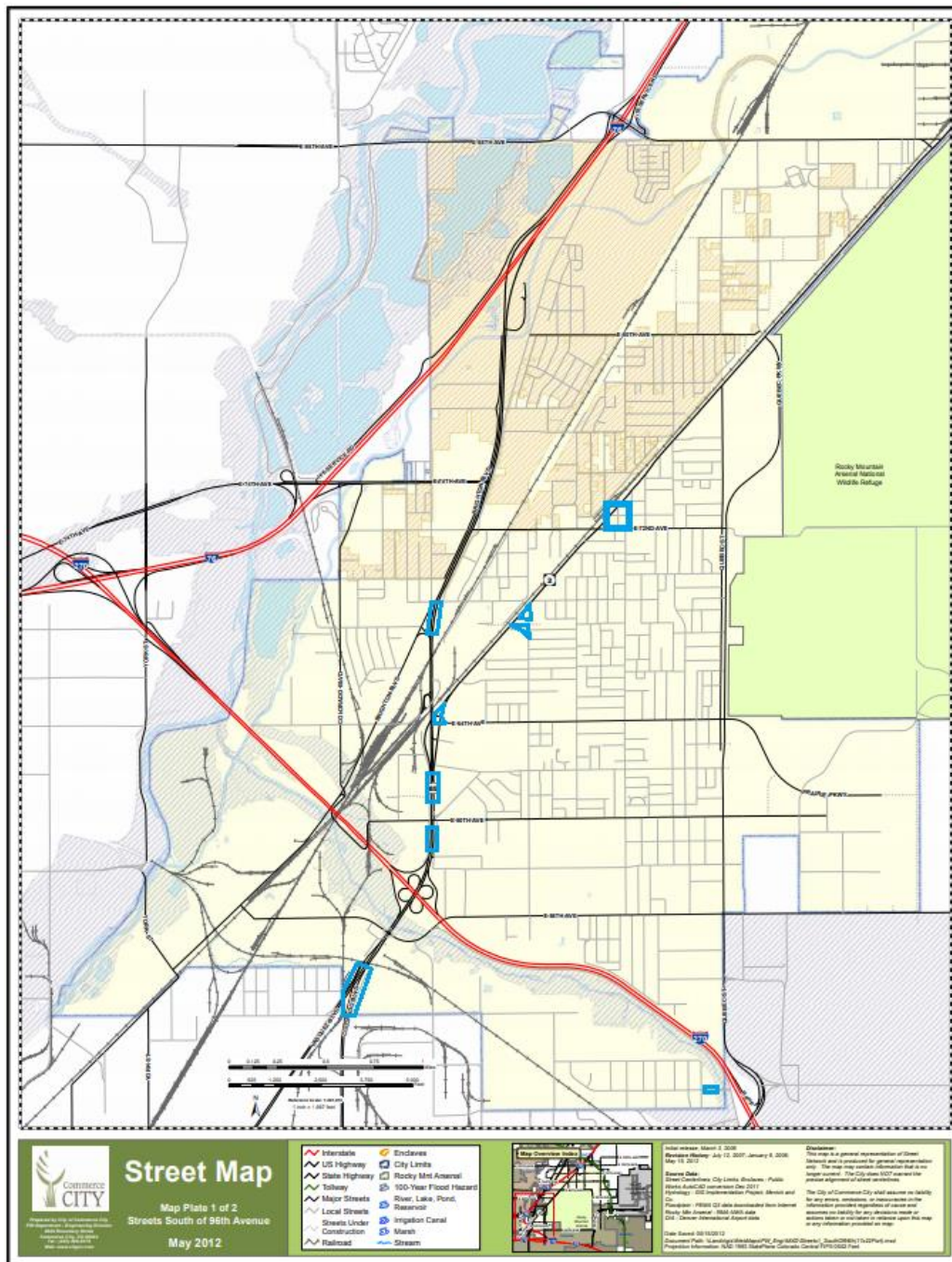
(i) All fertilizations of turf grass must have at least 1 lb of nitrogen per 1000 square feet. The Contractor must provide details of the exact make up and intensity of each application. (ii) All pre-emergent and post emergent weed controls will use a broadcast broadleaf application, to include the adjoining hardscapes and vacant bedding areas. (iii) Hourly Rates. (iv) Per 1000 sq feet 3 inch lift. (v) Must occur during the last mowing/trimming of the month.

US 85 and Hwy 2:

Total Acres: 3.524 Breakdown Turf 1.662 Shrub Beds 1.173 Native Grass .689

Total Number of iCentral enabled Controllers: 6

Total Number of Backflows: 11



Section 3: 104th and Chambers Medians

Commerce City Right Of Way Landscape Maintenance Scope of Service

A. Scope:

- (i) **Services:** This section shall serve as the reference for programmatic services for 104th Avenue and Chambers Road medians. The Contractor shall also provide non-programmatic services as authorized by the Department of Parks, Recreation & Golf and agreed to by the Contractor. Such non-programmatic, ad hoc services are never part of programmed, routine maintenance. All ad hoc services will follow the Work Order process as outlined in the Agreement.
- (ii) **Communication:** The Contractor will provide the City with a reasonable and professional level of communication. The City will provide a shared web based Agronomic Calendar with scheduled services and areas for ad hoc services. The Contractor will communicate within reasonable windows when the contractor will provide programmed services and the Contractor will provide the City with the exact dates of its programmed services, with details, in the provided Agronomic Calendar. Additionally the Contractor shall provide the City with detailed information on completed services for programmed and ad hoc services, within the provided detail sections of the Agronomic Calendar.

B. Turf Maintenance:

- (i) **Mowing:** Turf areas shall be mowed 26 times between April and October as approved and directed by the City. Mowing frequencies shall follow the pattern laid out in the 104th and Chambers Medians Agronomic Calendar. Mowing frequencies can and will be adjusted, based upon short and long term weather variations. It is understood that mowing will take place on specific dates when conditions allow. Mowing height will be based upon turf variety and season, meeting the horticultural best practices for such turf varieties. Turf clippings shall be mulched and not caught or removed from turf areas unless they are lying in clumps which could damage the turf or other landscaping. The City reserves the right to identify clippings as excessive at its sole discretion.
- (ii) **Trimming:** String trimming shall occur with the 26 scheduled mowings between April and October to be determined and approved by the City. Utility cabinets, lights, sign poles and other objects shall be trimmed around to assure a neat and attractive appearance at the time of each mowing.
- (iii) **Edging:** All turf areas adjacent to sidewalks or other hardscapes shall be edged 7 times, at a minimum, as specified in the Agronomic Calendar. Waste from edging

- shall be bagged and removed from the site in order to maintain the broom swept appearance which is the minimum expectation for how a site should look after service.
- (iv) Post-emergent weed control: Turf areas shall be kept free of weeds by the use of a chemical herbicide to promote a healthy appearance.
 - (v) Disease control: The Contractor may diagnose and propose treatment of diseased turf areas on an ad hoc basis, to be determined and approved by the City.
 - (vi) Backpack blowing: Blowing shall occur at the time of each mowing. Sidewalks, curb and gutters and other hardscapes shall be blown and kept clean of grass clippings and other debris with the use of power-operated blowers.
 - (vii) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
 - (viii) Fertilization: Turf areas shall be fertilized as warranted by soil sampling and analysis, with a commercial fertilizer as approved by the City two times a year, in accordance with the Agronomic Calendar. The Contractor must provide the City with fertilizer mixture and application rates.
 - (ix) Aeration: Core aeration shall be performed once a year in accordance with the Agronomic Calendar, with a walk behind and/or a tow behind aerator. Aeration plugs shall be left and not caught or removed from the turf areas.

C. Shrub and Bed Maintenance:

- (i) Trimming and pruning: Shrub pruning shall occur twice a year as specified in the Agronomic Calendar. The fall pruning shall only include shrubs that are blocking lines of sight or the right of way. Late winter/early spring pruning shall include ornamental grasses and any shrubs or perennials that have been determined to need pruning. The annual pruning of shrubs should be done to maintain growth within space limitations, and it will vary depending upon the species. Perennial dead heading will be done on an as needed basis throughout the year. Pruning necessitated by storm damage, disease, neglected overgrowth and winterkill will occur on an as needed basis as part of the routine maintenance of the shrub and bed areas. None of the shrubs in the contract area need to be cut into artificial box, square, ball or other fancy shapes. All pruning will be done on a species and site specific basis, under the direction and approval of the City.
- (ii) Weed and spot control: The shrub beds and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds, at the discretion of the City. Spot weed control will occur in the shrub and bed areas according to the Agronomic Calendar for a total of 12 times a year.
- (iii) Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best management practices, to the shrub beds, where applicable,

and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic Calendar.

- (iv) Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds when they are rosettes and with manual removal if they are bolting. Manually removed weeds shall be removed from the site. At no time will bolted weeds be left in the shrub or bed areas. Post-emergent weed control shall occur twice a year as specified in the Agronomic Calendar..
- (v) Disease control: The Contractor may diagnose and treat diseased shrubs on an ad hoc basis, to be determined and approved by the City.
- (vi) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis, to be determined and approved by the City.
- (vii) Additional Mulch: The Contractor may be tasked with providing additional mulch for the shrub and bed areas on an ad hoc basis, to be determined and approved by the City.

D. Tree Maintenance:

- (i) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (ii) Trimming up to 10': Once a year programmed trimming shall occur. Low hanging branches above walkways, drive lanes and high use turf areas that present a hazard to pedestrians, vehicles and park users will be pruned to a safe height not to exceed 10 feet. Volunteers and suckers will also be removed. It is incorporated into this scope of service, and the bid price, that routine trimming of broken and/or hazardous branches will be trimmed upon discovery by the Contractor or at the direction of the City.
- (iii) Tree rings: Tree rings will be chemically treated six times a year in accordance with the Agronomic Calendar to control weeds and grass adjacent to tree trunks. A safe buffer will be maintained to protect trees from damage.

E. System Wide Maintenance

- i. Spring clean up: As specified in the Agronomic calendar, the Contractor shall perform Spring clean up once a year. This service shall include the removal of debris from the turf, shrub beds and mulched areas. The Contractor should use whatever equipment is necessary to maintain a neat appearance in the contract areas.
- ii. Fall clean up (leaf removal): Fall clean up shall occur twice a year as specified in the Agronomic calendar. The Contractor shall ensure that all leaves and other debris are removed from the contract area to ensure a neat appearance.
- iii. Litter removal:
 - a. April thru October, all turf areas will be inspected for debris and trash before mowing. The debris and trash shall be removed from the contract area. In the shrub bed areas and the native grass areas, debris and trash shall be removed

before any mowing takes place. In non-mowed areas, such as shrub beds and native grass areas on non-service weeks, litter and debris removal shall occur at a minimum of every other week, to coincide with spot weed control in those areas, in accordance with the Agronomic Calendar. .

- b. November thru March, litter and debris removal shall occur every other week in accordance with the Agronomic Calendar.

G. Irrigation

- i. Spring charge up and activation: The Contractor shall perform the charge up and activation of the irrigation system. The system charge up shall include, but not be limited to, installing backflows at each of the controller areas (5 back flows which are kept in storage during non-irrigation months with the City), all back flows are currently reduced pressure, adjustable angle, bolt on, bolt off design. The Contractor shall insure that the system is fully functioning to include system operation checks on the full operational capacity, functionality and necessary adjustments of each controller, master valve, flow sensor, solenoid valve, head, emitter, bubbler, etc.
- ii. Irrigation monitoring & iCentral utilization: On a routine basis, but not less than weekly, from May thru September the Contractor shall monitor each irrigation controller via the iCentral system to ensure that it meets the minimum operating requirements of the City. iCentral is a web based irrigation monitoring system operated by Rain Master Control Systems. Each controller must be able to be monitored with the iCentral system, operate its programs with automated EvapoTranspiration adjustments and utilize flow sensors and master valves to regulate, monitor and generate automated system alarms and reports.
- iii. System checks: The Contractor shall perform monthly irrigation system checks six times in accordance with the Agronomic Calendar. System checks shall include the visual inspection of each zones operation in order to ensure that there are no malfunctions and verify flow sensor and master valve functionality. Routine irrigation adjustments, such as adjusting sprinkler heads for coverage, are considered routine maintenance and are incorporated into this scope of service, they will not be billed to the City. All repairs and replacements must have written approval from the City, e-mail and text communications shall suffice as approval. Repairs under \$500 may be completed without a work order, repairs over \$500 must have an accompanying work order executed prior to the performance of work.
- iv. Water use: In an effort to conserve water resources and ensure prudential use of the City's budget, water conservation efforts will be required on the behalf of the Contractor. These efforts shall include but are not limited to; conservative irrigation runtimes and start times, the use of ET (EvapoTranspiration) scheduling, water usage reporting, and potential water budget/consumption limitations or restrictions. The City and the Contractor will communicate routinely on water usage.

- v. System winterization: The Contractor shall perform the seasonal winterization of the irrigation system once a year in accordance with the Agronomic calendar. The irrigation system will be drained of water and it will have forced air injected into the lines to clear all water from the lines, valves, heads & fittings (the flow sensor must be removed before this is done to prevent damage). All backflows must be tagged, removed and provided to the City for winter storage. Backflows must be removed from the field at the time that the system is drained to prevent theft. The Contractor will be responsible for the replacement of any backflow theft or loss after winterization has occurred.

2019 Agronomic Calendar for 104th and Chambers Medians														
Turf Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Mow					2	5	4	5	4	4	2			26
Trimming					2	5	4	5	4	4	2			26
Backpack blowing					2	5	4	5	4	4	2			26
Edging					1	1	1	1	1	1	1			7
Post-emergent weed control					1			1						2
Disease control	X													0
Insect control	X													0
Fertilizer (i)					1					1				2
Aeration					1									1
Shrub and Bed Maint.	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Trimming and pruning				1						1				2
Weed/Spot control					1	2	2	2	2	2	1			12
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Disease control (iii)	X													0
Insect control (iii)	X													0
Add mulch (iv)	X													0
Tree Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Insect control	X													0
Trimming up to 10'	X							1						1
Tree rings					1	1	1	1	1	1				6
System Wide Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring clean up				1										1
Fall clean up (leaf removal)											1	1		2
Litter Removal	X	2	2	2	2	2	2	2	2	2	2	2	2	24
Irrigation	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring charge up and activation					1									1
System checks						1	1	1	1	1	1			6
Monitoring						5	4	4	5	4				22
System winterization											1			1

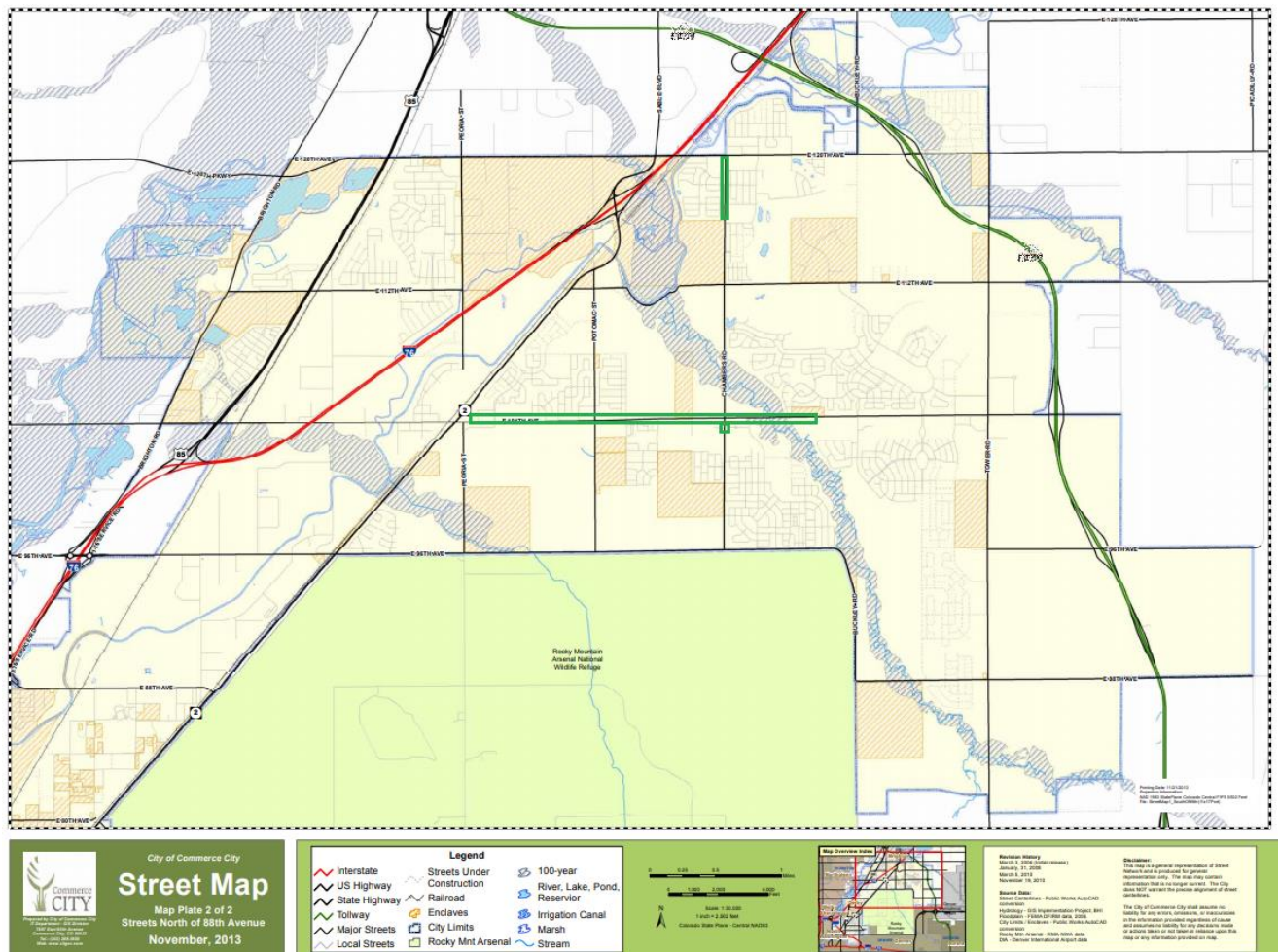
(i) All fertilizations of turf grass must have at least 1 lb of nitrogen per 1000 square feet. The Contractor must provide details of the exact make up and intensity of each application. (ii) All pre-emergent and post emergent weed controls will use a broadcast broadleaf application, to include the adjoining hardscapes and vacant bedding areas. (iii) Hourly Rates. (iv) Per 1000 sq feet 3 inch lift.

104th and Chambers Medians:

Total Acres: 10.096 Breakdown Turf .378 Shrub Beds 9.718

Total Number of iCentral enabled Controllers: 7

Total Number of Backflows: 5



Section 4: 112th and Potomac

Commerce City Right Of Way Landscape Maintenance Scope of Service

A. Scope:

- (i) **Services:** This section shall serve as the reference for programmatic services for 112th Avenue and Potomac Streete. The Contractor shall also provide non-programmatic services as authorized by the Department of Parks, Recreation & Golf and agreed to by the Contractor. Such non-programmatic, ad hoc services are never part of programmed, routine maintenance. All ad hoc services will follow the Work Order process as outlined in the Agreement.
- (ii) **Communication:** The Contractor will provide the City with a reasonable and professional level of communication. The City will provide a shared web based Agronomic Calendar with scheduled services and areas for ad hoc services. The Contractor will communicate within reasonable windows when the contractor will provide programmed services and the Contractor will provide the City with the exact dates of its programmed services, with details, in the provided Agronomic Calendar. Additionally the Contractor shall provide the City with detailed information on completed services for programmed and ad hoc services, within the provided detail sections of the Agronomic Calendar.

B. Turf Maintenance:

- (i) **Mowing:** Turf areas shall be mowed 26 times between April and October as approved and directed by the City. Mowing frequencies shall follow the pattern laid out in the 112th and Potomac Agronomic Calendar. Mowing frequencies can and will be adjusted, based upon short and long term weather variations. It is understood that mowing will take place on specific dates when conditions allow. Mowing height will be based upon turf variety and season, meeting the horticultural best practices for such turf varieties. Turf clippings shall be mulched and not caught or removed from turf areas unless they are lying in clumps which could damage the turf or other landscaping. The City reserves the right to identify clippings as excessive at its sole discretion.
- (ii) **Trimming:** String trimming shall occur with the 26 scheduled mowings between April and October to be determined and approved by the City. Utility cabinets, lights, sign poles and other objects shall be trimmed around to assure a neat and attractive appearance at the time of each mowing.
- (iii) **Edging:** All turf areas adjacent to sidewalks or other hardscapes shall be edged 7 times, at a minimum, as specified in the Agronomic Calendar. Waste from edging shall be bagged and removed from the site in order to maintain the broom swept appearance which is the minimum expectation for how a site should look after service.

- (iv) Post-emergent weed control: Turf areas shall be kept free of weeds by the use of a chemical herbicide to promote a healthy appearance.
- (v) Disease control: The Contractor may diagnose and propose treatment of diseased turf areas on an ad hoc basis, to be determined and approved by the City.
- (vi) Backpack blowing: Blowing shall occur at the time of each mowing. Sidewalks, curb and gutters and other hardscapes shall be blown and kept clean of grass clippings and other debris with the use of power-operated blowers.
- (vii) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (viii) Fertilization: Turf areas shall be fertilized as warranted by soil sampling and analysis, with a commercial fertilizer as approved by the City two times a year, in accordance with the Agronomic Calendar. The Contractor must provide the City with fertilizer mixture and application rates.
- (ix) Aeration: Core aeration shall be performed once a year in accordance with the Agronomic Calendar, with a walk behind and/or a tow behind aerator. Aeration plugs shall be left and not caught or removed from the turf areas.

C. Shrub and Bed Maintenance:

- (i) Trimming and pruning: Shrub pruning shall occur twice a year as specified in the Agronomic Calendar. The fall pruning shall only include shrubs that are blocking lines of sight or the right of way. Late winter/early spring pruning shall include ornamental grasses and any shrubs or perennials that have been determined to need pruning. The annual pruning of shrubs should be done to maintain growth within space limitations, and it will vary depending upon the species. Perennial dead heading will be done on an as needed basis throughout the year. Pruning necessitated by storm damage, disease, neglected overgrowth and winterkill will occur on an as needed basis as part of the routine maintenance of the shrub and bed areas. None of the shrubs in the contract area need to be cut into artificial box, square, ball or other fancy shapes. All pruning will be done on a species and site specific basis, under the direction and approval of the City.
- (ii) Weed and spot control: The shrub beds and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds, at the discretion of the City. Spot weed control will occur in the shrub and bed areas according to the Agronomic Calendar for a total of 12 times a year.
- (iii) Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best management practices, to the shrub beds, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic Calendar

- (iv) Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds when they are rosettes and with manual removal if they are bolting. Manually removed weeds shall be removed from the site. At no time will bolted weeds be left in the shrub or bed areas. Post-emergent weed control shall occur twice a year as specified in the Agronomic Calendar.
- (v) Disease control: The Contractor may diagnose and treat diseased shrubs on an ad hoc basis, to be determined and approved by the City.
- (vi) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis, to be determined and approved by the City.
- (vii) Additional Mulch: The Contractor may be tasked with providing additional mulch for the shrub and bed areas on an ad hoc basis, to be determined and approved by the City.

D. Tree Maintenance:

- (i) Insect control: The Contractor may be tasked with performing insect control on an ad hoc basis as approved and directed by the City.
- (ii) Trimming up to 10': Once a year programmed trimming shall occur. Low hanging branches above walkways, drive lanes and high use turf areas that present a hazard to pedestrians, vehicles and park users will be pruned to a safe height not to exceed 10 feet. Volunteers and suckers will also be removed. It is incorporated into this scope of service, and the bid price, that routine trimming of broken and/or hazardous branches will be trimmed upon discovery by the Contractor or at the direction of the City.
- (iii) Tree rings: Tree rings will be chemically treated six times a year in accordance with the Agronomic Calendar to control weeds and grass adjacent to tree trunks. A safe buffer will be maintained to protect trees from damage.

E. Native Grass Areas:

- i. **112th and Potomac: The “No-Mow RFT Sod” consists of 2.83 acres of tree lawn. These areas need to be mowed only once a year, as outlined in the agronomic calendar. This area additionally needs three beauty bands a year, 10” wide along all borders of the tree lawn adjacent to hard surfaces. The expectation is that these bands may be made with a string trimmer.**

Native grass clippings shall be mulched and not caught or removed from native grass areas unless they are lying in clumps which could damage the native grass or other landscaping. Clumps shall be bagged and removed from the site. The City reserves the right to identify clippings as excessive at its sole discretion.

- ii. A backpack blower, or substitute item, will be used to ensure that the sidewalks are in a neat and clean condition after the trimming.

- iii. Pre-emergent weed control: The contractor shall apply pre-emergent herbicide, according to industry best managerial practices, to the native grass areas, where applicable, and to the surrounding hardscapes. Pre-emergent weed control shall occur twice a year as specified in the Agronomic calendar.
- iv. Post-emergent weed control: Post-emergent weed control shall include contact herbicides for broadleaf weeds in a broadband application. Post-emergent weed control shall occur twice a year as specified in the Agronomic calendar.
- v. Weed and spot control: The native grass areas and adjoining curb and gutter, sidewalks and miscellaneous hardscapes will be kept reasonably free of broadleaf or grassy weeds at the sole discretion of the City. The Contractor is expected to treat rosettes with spot herbicides and with manual extraction if they are bolting. Pulled weeds shall be removed from the site. At no time will bolted weeds be left in the native grass areas. Weed and spot control will occur in the native grass areas according to the Agronomic Calendar for a total of 12 times a year.
- vi. Edging: The native grass areas will be edged once a year, as laid out in the agronomic calendar. During the dates where edging occurs the same standards for the appearance of the hardscapes after the service will apply. The edging must occur during the last mowing/trimming of the month.

F. System Wide Maintenance

- i. Spring clean up: As specified in the Agronomic calendar, the Contractor shall perform Spring clean up once a year. This service shall include the removal of debris from the turf, shrub beds and mulched areas. The Contractor should use whatever equipment is necessary to maintain a neat appearance in the contract areas.
- ii. Fall clean up (leaf removal): Fall clean up shall occur twice a year as specified in the Agronomic calendar. The Contractor shall ensure that all leaves and other debris are removed from the contract area to ensure a neat appearance.
- iii. Litter removal:
 - a. April thru October, all turf areas will be inspected for debris and trash before mowing. The debris and trash shall be removed from the contract area. In the shrub bed areas and the native grass areas, debris and trash shall be removed before any mowing takes place. In non-mowed areas, such as shrub beds and native grass areas on non-service weeks, litter and debris removal shall occur at a minimum of every other week, to coincide with spot weed control in those areas, in accordance with the Agronomic Calendar. .
 - b. November thru March, litter and debris removal shall occur every other week in accordance with the Agronomic Calendar.

G. Irrigation

- i. Spring charge up and activation: The Contractor shall perform the charge up and activation of the irrigation system. The system charge up shall include, but not be limited to, installing backflows at each of the controller areas (1 back flow is kept in storage during non-irrigation months with the City), all back flows are currently reduced pressure, adjustable angle, bolt on, bolt off design. The Contractor shall insure that the system is fully functioning to include system operation checks on the full operational capacity, functionality and necessary adjustments of each controller, master valve, flow sensor, solenoid valve, head, emitter, bubbler, etc.
- ii. Irrigation monitoring & iCentral utilization: On a routine basis, but not less than weekly, from May thru September the Contractor shall monitor each irrigation controller via the iCentral system to ensure that it meets the minimum operating requirements of the City. iCentral is a web based irrigation monitoring system operated by Rain Master Control Systems. Each controller must be able to be monitored with the iCentral system, operate its programs with automated EvapoTranspiration adjustments and utilize flow sensors and master valves to regulate, monitor and generate automated system alarms and reports.
- iii. System checks: The Contractor shall perform monthly irrigation system checks six times in accordance with the Agronomic Calendar. System checks shall include the visual inspection of each zones operation in order to ensure that there are no malfunctions and verify flow sensor and master valve functionality. Routine irrigation adjustments, such as adjusting sprinkler heads for coverage, are considered routine maintenance and are incorporated into this scope of service, they will not be billed to the City. All repairs and replacements must have written approval from the City, e-mail and text communications shall suffice as approval. Repairs under \$500 may be completed without a work order, repairs over \$500 must have an accompanying work order executed prior to the performance of work.
- iv. Water use: In an effort to conserve water resources and ensure prudential use of the City's budget, water conservation efforts will be required on the behalf of the Contractor. These efforts shall include but are not limited to; conservative irrigation runtimes and start times, the use of ET (EvapoTranspiration) scheduling, water usage reporting, and potential water budget/consumption limitations or restrictions. The City and the Contractor will communicate routinely on water usage.
- v. System winterization: The Contractor shall perform the seasonal winterization of the irrigation system once a year in accordance with the Agronomic calendar. The irrigation system will be drained of water and it will have forced air injected into the lines to clear all water from the lines, valves, heads & fittings (the flow sensor must be removed before this is done to prevent damage). All backflows must be tagged, removed and provided to the City for winter storage. Backflows must be removed from the field at the time that the system is drained to prevent theft. The Contractor will be responsible for the replacement of any backflow theft or loss after winterization has occurred.

2019 Agronomic Calendar for 112th and Potomac

	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Turf Maintenance														
Mow					2	5	4	5	4	4	2			26
Trimming					2	5	4	5	4	4	2			26
Backpack blowing					2	5	4	5	4	4	2			26
Edging					1	1	1	1	1	1	1			7
Post-emergent weed control					1			1						2
Disease control	X													0
Insect control	X													0
Fertilizer (i)					1					1				2
Aeration					1									1
Shrub and Bed Maint.	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Trimming and pruning				1						1				2
Weed/Spot control					1	2	2	2	2	2	1			12
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Disease control (iii)	X													0
Insect control (iii)	X													0
Add mulch (iv)	X													0
Tree Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Insect control	X													0
Trimming up to 10'	X							1						1
Tree rings					1	1	1	1	1	1				6
No-Mow RFT SOD	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Tree Lawns											1			1
Beauty bands (10")					1		1		1					3
Pre-emergent weed control (ii)	X			1			1							2
Post-emergent weed control (ii)	X			1			1							2
Weed/Spot control	X				1	2	2	2	2	2	1			12
Edging (v)	X										1			1
System Wide Maintenance	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring clean up				1										1
Fall clean up (leaf removal)											1	1		2
Litter Removal	X	2	2	2	2	2	2	2	2	2	2	2	2	24
Irrigation	Extra Services	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Spring charge up and activation					1									1
System checks						1	1	1	1	1	1			6
Monitoring						5	4	4	5	4				22
System winterization											1			1

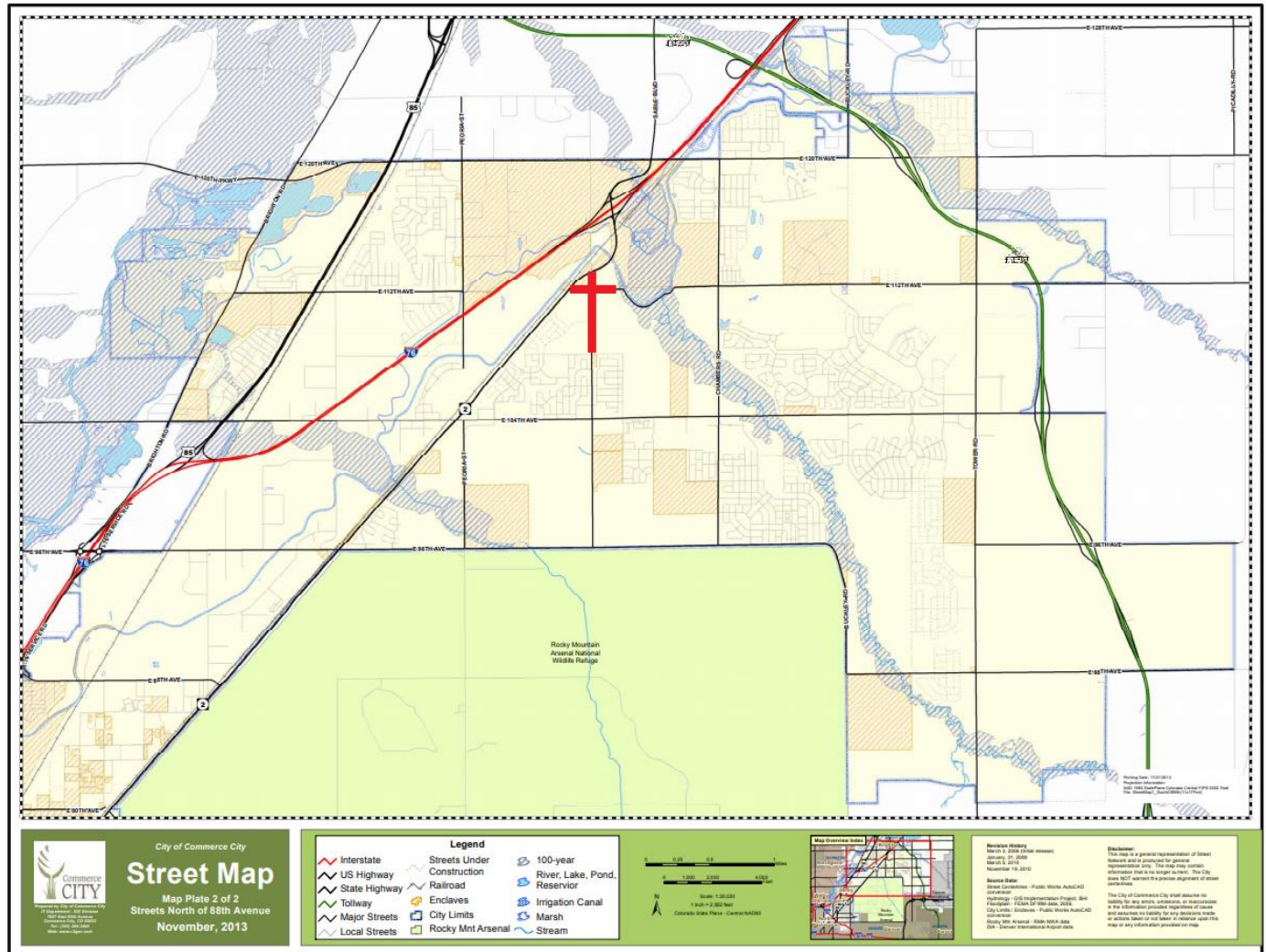
(i) All fertilizations of turf grass must have at least 1 lb of nitrogen per 1000 square feet. The Contractor must provide details of the exact make up and intensity of each application. (ii) All pre-emergent and post emergent weed controls will use a broadcast broadleaf application, to include the adjoining hardscapes and vacant bedding areas. (iii) Hourly Rates. (iv) Per 1000 sq feet 3 inch lift. (v) Must occur during the last mowing/trimming of the month.

112th and Potomac:

Total Acres: 3.926 Breakdown Turf .287 Shrub Beds .809 Native Grass 2.83

Total Number of iCentral enabled Controllers: 1

Total Number of Backflows: 1



NO-MOW RTF[®] SOD

"If you need a low maintenance turf look no further than RTF sod.
No mowing, less water, less fertilizer - sounds great to me!"

Frank Berns, Farm Manager
Ameri-Turf Sod Farm, CA

"RTF is fantastic for my roughs
and out of bounds areas. The
more we neglect it, the better it
looks."

DeWayne Diehl, CGCS, Golf Course Superintendent
Owl Creek Country Club, Louisville, Kentucky



NO MOWING

Grows to only 12" in height.



LESS FERTILIZER

Stays green longer with less input.



LOW WATER USE

Deep roots seek out water all year.

 **BARENBRUG**
Great in Grass[®]



NO-MOW RTF

Your low maintenance turf solution.

NO-MOW RTF SOD



RTF is a registered trademark of Barenbrug USA. US Patent#6,677,507.

Is it possible to have high quality turf low input?

It is if you choose RTF SOD. The expectations for "no-mow" products are ever increasing and only RTF SOD can deliver. Without mowing and using very little fertilizer and water, RTF SOD will not disappoint your low maintenance turf needs.

RTF (rhizomatous tall fescue) is an advanced generation of turf type tall fescue, which produces rhizomes. A rhizome is an underground stem that penetrates through the soil to spread the plant. Rhizomes send shoots up to the soil surface while extending new roots downward, forming a new plant. The rhizomatous nature of RTF is similar to Kentucky bluegrass, and thrives in the transition zone. The rhizomatous nature of RTF also makes the plant more drought tolerant.

In a two year trial RTF SOD exhibited an average height of 12 inches and a very dense, high quality turf. During the trial it was not mown a single time. It was also starved of water and fertilizer to better imitate real life situations it would be required to endure. RTF SOD performed great, it maintained a dense sod and it withstood the drought conditions very well. RTF SOD is a great alternative to fine fescues that are not as drought tolerant or traffic tolerant as tall fescue. Choose RTF SOD for a beautiful NO-MOW turf.

Maintenance recommendations:

- **DO NOT MOW**
- Fertilize once a year in fall, (high potassium - low nitrogen)
- Water occasionally for extended periods for optimum color.
- No fungicides necessary.
- Turf will grow to a height of 9 - 14 inches



Find your RTF SOD here:

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