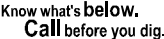


*BIOSCIENCE I - WEST PARKING LOT
CONSTRUCTION DOCUMENTS
OCTOBER 2017*

FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC
PROJECT No. 17.062.022



3. ALL MATERIALS, WORKMANSHIP, CONSTRUCTION DETAILS, AND TESTING FOR WATER LINE CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS FOR WATER DISTRIBUTION LINES AS SET FORTH BY THE CITY OF AURORA, DEPARTMENT OF UTILITIES, LATEST REVISION.
2. ALL FIRE HYDRANTS MUST BE GRADE STAKED IN THE FIELD WHENEVER CURB AND GUTTER HAS NOT BEEN INSTALLED.
3. ALL UTILITY EASEMENTS MUST REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR MAINTENANCE EQUIPMENT.
4. WATER MAIN RESTRAINT SHALL BE IN ACCORDANCE WITH THE CITY OF AURORA PUBLIC UTILITY IMPROVEMENTS RULES AND REGULATIONS REGARDING STANDARDS AND SPECIFICATIONS, LATEST EDITION, MEGALUGS OR UNIFLANGE MAY BE USED IN PLACE OF RODS AND CLAMPS.
5. WATER LINE VALVES ARE NOT ALLOWED IN CROSS PANS.
6. ALL WATER METERS, WATER SERVICE LINES AND SANITARY SEWER SERVICE LINES ARE NOT ALLOWED IN OR UNDER DRIVEWAYS.
7. ALL SANITARY SERVICE LINES SHALL BE TEES OFF OF MAINS.
8. NO CONNECTIONS ARE ALLOWED TO THE FIRE LINE BETWEEN THE GATE VALVE AT THE WATER LINE MAIN AND THE BACK FLOW PREVENTER (WITHIN THE BUILDING).
9. FITZSIMONS IS LOCATED IN AURORA, PRESSURE ZONE 2A, PRESSURES AT THE CONNECTION POINTS RANGE FROM 85 TO 110 PSI. ZERO (0) PSI AT ELEV 5565 STATIC. PRV IS REQUIRED WHEN THE PRESSURE AT THE UNIT IS GREATER THAN EIGHTY (80) PSI.
10. ADJUST ALL MANHOLES, FIRE HYDRANTS, AND VALVE BOXES TO GRADE PER CITY OF AURORA STANDARDS AND SPECIFICATIONS, LATEST REVISION, AS NECESSARY.
11. THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
12. ALL FIRE LINES AND COMMERCIAL WATER SERVICE LINES WILL REQUIRE REDUCED PRESSURE BACK FLOW PREVENTER OR DOUBLE CHECK VALVE AS REQUIRED BY THE CITY OF AURORA UTILITY DEPARTMENT. CONTACT THE BUILDING DIVISION AT (303) 739-7420 TO SCHEDULE FLOW TESTS FOR PRIVATE FIRE LINES PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
13. THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

1. CORES SHOWING ADEQUACY OF PAVEMENT IN ACCORDANCE WITH AN APPROVED SOILS REPORT AND PAVEMENT DESIGN ARE REQUIRED PRIOR TO ISSUANCE OF STREET PERMITS. IF THE DEVELOPER CANNOT PROVE ADEQUACY HE SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING PAVEMENT AND REPLACEMENT WITH THE PROPERLY DESIGNED PAVEMENT. ANY CONSTRUCTION BEYOND CENTERLINE OF THE STREET IN ORDER TO MATCH EXISTING GRADES AND TO MAKE A SAFE, DRIVEABLE SURFACE WILL ALSO BE THE DEVELOPER'S RESPONSIBILITY.
2. CONTRACTOR SHALL REMOVE ALL EXISTING SIGNING AND STRIPING, WITHIN THE PROJECT LIMITS, THAT CONFLICTS WITH THIS PLAN SET.
3. CROSSWALK PLACEMENT PER CITY OF AURORA STANDARD DETAIL TE-14.
4. ALL REMOVED TRAFFIC SIGNS SHALL BE RETURNED TO THE CITY OF AURORA TRAFFIC OPERATIONS, JEFF DAVIS, (303) 326-8230.
5. ALL REMOVED DEVELOPMENT, REAL ESTATE, OR BILLBOARD ADVERTISING SIGNS SHALL BE RETURNED TO THE APPROPRIATE OWNER.
6. CONTRACTOR TO COORDINATE ALL SIGNALIZATION WORK WITH THIS PLAN SET.
7. ALL STREET NAME SIGNS WILL BE INSTALLED BY THE CITY OF AURORA.
8. ALL SHADED DIRECTIONAL ARROWS WILL BE INSTALLED AS PAVEMENT MARKINGS.
9. CONCRETE DECK AND SIDEWALK JOINTING SHOWN IS SCHEMATIC. REFERENCE THE LANDSCAPE PLANS AND ARCHITECTURAL PLANS AND SPECIFICATIONS FOR CONSTRUCTION DETAILS.

CONCRETE PAVEMENT: WHITE SKIP/DASH: USE STAMARK 3801-5 CONTRAST TAPE, YELLOW: USE EPOXY MARKINGS
SOLID WHITE: USE EPOXY MARKINGS.

ASPHALT PAVEMENT: ALL COLORS: USE THERMOPLASTIC MARKINGS.

1. WATER MAIN SHALL BE PVC C900 CLASS 200 IN CONFORMANCE WITH AWWA C-151 AND JOINTS TO BE IN ACCORDANCE WITH THE AWWA C-111, OR APPROVED SUBSTITUTE. ALL FITTINGS SHALL BE MADE FROM DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINTS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI.
2. ELECTRONIC MARKER SYSTEM: P.V.C. WATER PIPE SHALL BE INSTALLED WITH ELECTRONIC MARKERS AT A SPACING OF 1 MARKER FOR EVERY 60 LINEAL FEET OF PIPE OR AT EVERY BEND, TEE OR DEFLECTION IN THE PIPE. THESE MARKERS SHALL BE BLUE IN COLOR AND AS MANUFACTURED BY 3M SCOTCHMARK OR APPROVED EQUAL. THE CONTRACTOR SHALL PLACE THE APPROPRIATE BALL MID-RANGE (UP TO 6 FEET) OR FULL-RANGE (UP TO 8 FEET) MARKER AS NECESSARY DEPENDING ON THE ACTUAL DEPTH OF THE MAIN.
3. PLUMBING CONTRACTOR SHALL CONTACT LOCAL PUBLIC WATER/WATER DEPARTMENT TO DETERMINE AVAILABLE WATER PRESSURE AND WATER HARDNESS
4. REFER TO CITY OF AURORA STANDARD 24.07 FOR WATER MAIN TAPS.

1. ON ALL INLETS, IN A SUMP CONDITION, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 0.5% GRADE AT FLOWLINE INTO THE INLET.
2. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS.
3. STORM MANHOLE STATION, OFFSET AND RIM ELEVATIONS LISTED ARE REFERENCED TO THE CENTER OF THE MANHOLE.
4. STORM INLET STATION, OFFSET, AND ELEVATIONS LISTED ARE REFERENCED TO THE -C OF THE BOX @ THE FLOWLINE.
5. ALL REINFORCED CONCRETE PIPE BEDDING SHALL BE CLASS B PER C.O.A. STANDARD DETAIL 101.
6. ALL STORM SEWER IS PRIVATE UNLESS OTHERWISE NOTED.
7. SEE C.O.A. STANDARD DETAILS S12.11 OR 400 FOR INLETS GREATER THAN 15' IN LENGTH.
8. ALL BOX BASE MANHOLES SHALL CONFORM TO CDOT STANDARD PLAN NO. M-604-20.
9. WHEN IT IS NECESSARY TO LOWER WATERLINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 2.0 FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES OR USE C.O.A. DETAIL 402 AT LOCATIONS SHOWN ON PLANS.

1. ALL SEWER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS CONFORMING TO ASTM D-3034, SDR 35 AS MANUFACTURED BY J-M MANUFACTURING CERTAINTED, DIAMOND PLASTICS, VINYL TECH, OF ULTRA-RIB BY E.T.I.
2. PVC PIPE USED FOR SANITARY SEWER SERVICES WILL MEET OR EXCEED ASTM D3034-SDR35. ALL JOINTS WILL BE WATERTIGHT. FITTINGS, SADDLES, BENDS, ETC. WILL BE PVC TYPE. PRESSURE RATE PVC PIPE CAN BE USED UP TO, BUT NO MORE THAN, 5 FEET OUTSIDE OF THE FOUNDATION WALL FOR CONNECTION TO THE SDR-35 PIPE.
3. PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER, THE CONTRACTOR AND A SURVEY CREW SHALL VERIFY INVERT ELEVATIONS OF EXISTING SEWER MAINS AND MANHOLES FOR PROPER CONNECTION OF PROPOSED SANITARY SEWER SYSTEM.
4. THE CITY OF AURORA REQUIRES PRECAST SANITARY SEWER MANHOLES OR APPROVED SUBSTITUTE, BENCHES AND CHANNELS SHALL BE CAST IN PLACE.
5. ALL SANITARY SERVICE LINES SHALL BE TEES OFF OF MAINS. WYES SHALL BE USED FOR LOTS AT BACK OF CUL-DE-SACS.
6. THE CONTRACTOR SHALL CONTACT THE C.O.A. WASTEWATER CONTROL DIVISION AT (303) 326-8050 FOR INSPECTION OF ANY REQUIRED GREASE TRAPS OR SAND/OIL INTERCEPTORS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

[illegible]

MAJOR CONTOUR
 MINOR CONTOUR
 SPOT ELEVATION
 BUILDING ENVELOPE
 WOOD FENCE
 PARKING STALL COUNT
 HANDICAP PARKING SYMBOL
 CATCH CURB AND GUTTER
 SPILL CURB AND GUTTER
 ROADWAY CENTERLINE
 SIDEWALK
 TRICKLE CHANNEL
 ROADWAY WALL OR BARRIER
 ROADWAY ASPHALT
 CONCRETE
 BOUNDARY LINE
 EASEMENT
 LOT LINE
 RIGHT-OF-WAY
 SETBACK
 TRACT LINE
 SURVEY MONUMENT
 DOUBLE POST ROADWAY SIGN
 SINGLE POST ROADWAY SIGN
 SINGLE POST ROADWAY SIGN WITH A
 TRAFFIC CABINET
 TRAFFIC PEDESTAL
 TRAFFIC SIGNAL
 TRAFFIC SIGNAL AND MAST
 CABLE TV UTILITY LINE
 OVERHEAD CABLE TV UTILITY LINE
 TV PEDESTAL
 ELECTRIC UTILITY LINE
 OVERHEAD ELECTRIC UTILITY LINE
 UTILITY CROSSING
 UTILITY POLE
 ELECTRICAL TRANSFORMER
 FIBER OPTIC UTILITY LINE
 GAS UTILITY LINE
 GAS METER
 GAS VALVE
 TELEPHONE UTILITY LINE
 OVERHEAD TELEPHONE UTILITY LINE
 TELEPHONE PEDESTAL
 IRRIGATION LINE
 STREET LIGHT - POST
 STREET LIGHT - MAST
 RIPRAP
 SANITARY SEWER LINE
 SANITARY SEWER FORCE MAIN
 SANITARY SEWER SERVICE
 SANITARY SEWER CLEANOUT
 UNDERDRAIN
 STORM SEWER LINE
 STORM SEWER ENERGY GRADE LINE
 STORM SEWER HYDRAULIC GRADE LINE
 STORM SEWER INLET
 STORM SEWER FLARED END SECTION
 WATER LINE
 WATER SERVICE
 WATER LINE GATE VALVE
 FIRE HYDRANT
 FIRE HYDRANT WITH THRUST BLOCK
 REDUCER
 BLOW-OFF
 WATER METER
 WELL LOCATION
 WATERLINE PLUG FITTING
 WATERLINE PLUG FITTING WITH A

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|--------|-------------------------|------|--------------------------------|
| BLDG | BUILDING | -P | PROPERTY LINE |
| B.O.C. | BACK OF CURB | POC | POINT OF CURVATURE |
| BOW | BOTTOM OF WALL | PCC | POINT OF COMPOUND CURVATURE |
| BW | BOTTOM OF WALL | PCR | POINT OF CURB RETURN |
| ~C | CENTERLINE | PI | POINT OF INTERSECTION |
| CFS | CUBIC FEET PER SECOND | PRC | POINT OF REVERSE CURVATURE |
| CMP | CORRUGATED METAL PIPE | PT | POINT OF TANGENCY |
| CY | CUBIC YARD | PVC | POLYVINYL CHLORIDE PIPE/ |
| DIA | DIAMETER | | POINT OF VERTICAL CURVATURE |
| DIP | DUCTILE IRON PIPE | PVI | POINT OF VERTICAL INTERSECTION |
| E | EASTING/EAST | PVT | POINT OF VERTICAL TANGENCY |
| EGL | ENERGY GRADE LINE | R | RADIUS |
| ELEV | ELEVATION | RCP | REINFORCED CONCRETE PIPE |
| EOA | EDGE OF ASPHALT | ROW | RIGHT-OF-WAY |
| EOC | EDGE OF CONCRETE | SAN | SANITARY SEWER |
| EOP | EDGE OF PAVEMENT | SF | SQUARE FEET |
| ESMT | EASEMENT | SSMH | SANITARY SEWER MANHOLE |
| FES | FLARED END SECTION | STA | STATION |
| FF | FINISHED FLOOR | SDMH | STORM MANHOLE |
| FG | FINISHED GRADE | SDWK | SIDEWALK |
| FL | FLOWLINE | SY | SQUARE YARD |
| FT | FEET | TBC | TOP BACK OF CURB |
| GV | GATE VALVE | TBR | TO BE REMOVED |
| GB | GRADE BREAK | TC | TOP OF CURB |
| HBP | HOT BITUMINOUS PAVEMENT | TG | TOP OF GRATE |
| HGL | HYDRAULIC GRADE LINE | TOP | TOP OF PIPE |
| HP | HIGH POINT | TOW | TOP OF WALL |
| INV | INVERT | TW | TOP OF WALL |
| IRR | IRRIGATION | TYP | TYPICAL |
| LF | LINEAR FEET | UE | UTILITY EASEMENT |
| LP | LOW POINT | UTIL | UTILITY |
| ME | MATCH EXISTING | VC | VERTICAL CURVE |
| N | NORTHING/NORTH | WSEL | WATER SURFACE ELEVATION |
| NTS | NOT TO SCALE | | |

| | |
|------------------|------|
| City Engineer | Date |
| Water Department | Date |

CITY OF AURORA
CONSTRUCTION DOCUMENTS

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|--------------|--------|--------------|--------------|----------------------------|
| DESIGNED BY: | SCALE | DATE ISSUED: | OCTOBER 2017 | DRAWING No. LA01 |
| DRAWN BY: | HORIZ. | | | |
| CHECKED BY: | VERT. | SHEET | 2 OF 5 | |

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| DESIGNED BY: | SCALE | DATE ISSUED: | OCTOBER 2017 | DRAWING No. LA01 |
| DRAWN BY: | HORIZ. | | | |
| CHECKED BY: | VERT. | SHEET | 2 OF 5 | |

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| REFERENCE DRAWINGS | | | | | |
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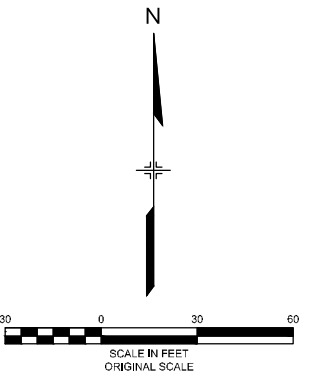
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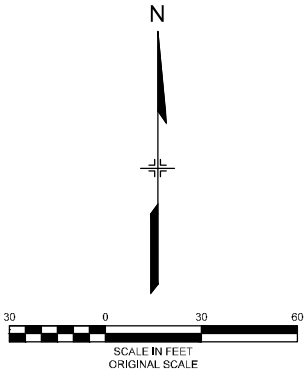
Matrix
DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

PRELIMINARY
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FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 17.062.022

[illegible]



LEGEND

- 5360 PROPOSED CONTOUR
- 5359 EXISTING CONTOUR
- x 73.40 SPOT ELEVATIONS (ADD 5300 FEET)
- SD STORM SEWER

NOTES

1. MAXIMUM CROSS-SLOPE NOT TO EXCEED 2.0%.
2. MAXIMUM SLOPE (ALONG TRAVEL LANE) IS 4.99% IN ADA ACCESSIBLE ROUTES.
3. MATCH EXISTING GRADES TO THE BACK OF CURB.

FITZSIMONS REDEVELOPMENT AUTHORITY

CITY OF AURORA
CONSTRUCTION DOCUMENTS

BIOSCIENCE I
OVERALL GRADING & UTILITY PLAN

SEAL

PRELIMINARY
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FOR AND ON BEHALF OF
MATRIX DESIGN GROUP, INC.
PROJECT No. 17,062,022

DESIGNED BY:
CHECKED BY:

SCALE
HORIZ.
VERT.

DATE ISSUED: OCTOBER 2017
SHEET 5 OF 5

DRAWING No.
OGP01



| REFERENCE DRAWINGS | | | |
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| X:PP-SITE | | | |
| X:056-EX-BASE | | | |
| X:056-EX-TOP-D-ANV088 | | | |
| X:Equities 1409-2016 Found Monuments | | | |
| X:MDG22x34(Bioscience I) | | | |
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| COMPUTER FILE MANAGEMENT | | | |
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| CTB FILE: --- | | | |
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| THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE. | | | |

CHECKED BY: XX
DRAWN BY: XX

LANDSCAPE NOTES

1. ALL LANDSCAPED AREAS ARE TO HAVE SOIL PREPARATION PER SPECIFICATIONS. (MINIMUM RATE OF 4 CU. YDS. OF ORGANIC MATTER PER 1000 S.F.).
2. THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLAN ON FILE WITH THE PLANNING DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED AS DELINEATED ON THE PLAN, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
3. ALL CROSSINGS OR ENCROACHMENTS BY PRIVATE LANDSCAPE IRRIGATION LINES OR SYSTEMS INTO EASEMENTS AND STREET RIGHTS-OF-WAY OWNED BY THE CITY OF AURORA ARE ACKNOWLEDGED BY THE OWNER AS BEING SUBJECT TO CITY OF AURORA'S USE AND OCCUPANCY OF THE SAID EASEMENTS OR RIGHTS-OF-WAY. THE OWNER, THEIR SUCCESSORS AND ASSIGNS, HEREBY AGREE TO INDEMNIFY THE CITY OF AURORA FOR ANY LOSS, DAMAGE OR REPAIR TO CITY FACILITIES THAT MAY RESULT FROM THE INSTALLATION, OPERATION, OR MAINTENANCE OF SAID PRIVATE IRRIGATION LINES OR SYSTEMS.
4. ALL UTILITY EASEMENTS SHALL REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR THE MAINTENANCE EQUIPMENT ENTRY.
5. ALL LANDSCAPED AREAS AND PLANT MATERIAL, EXCEPT FOR NON-IRRIGATED NATIVE, RESTORATIVE, AND DRYLAND GRASS AREAS THAT COMPLY WITH REQUIREMENTS FOUND IN SEC. 146-1429, MUST BE WATERED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. IRRIGATION SYSTEM DESIGN, INSTALLATION, OPERATION, AND MAINTENANCE SHALL CONFORM TO REQUIREMENTS FOUND IN THE CITY OF AURORA IRRIGATION ORDINANCE.
6. LANDSCAPE MATERIAL PLACEMENT SHALL NOT BE PLACED OR KEPT NEAR FIRE HYDRANTS, FIRE DEPARTMENT INLET CONNECTIONS OR FIRE PROTECTION CONTROL VALVES IN A MANNER THAT WOULD PREVENT SUCH EQUIPMENT OR FIRE HYDRANTS FROM BEING IMMEDIATELY DISCERNIBLE. THE FIRE DEPARTMENT SHALL NOT BE DETERRED OR HINDERED FROM GAINING IMMEDIATE ACCESS TO FIRE PROTECTION EQUIPMENT OR HYDRANTS.
7. ALL FIRE HYDRANTS SHALL BE LOCATED NOT LESS THAN THREE FEET-SIX INCHES (3'-6") AND NOT MORE THAN EIGHT (8') FEET FROM THE BACK OF CURB TO THE CENTER OF THE HYDRANT AND SHALL BE UNOBSTRUCTED ON THE STREET SIDE. MINIMUM CLEARANCE ON ALL OTHER SIDES SHALL BE FIVE FEET (5').
8. LANDSCAPING MATERIAL SHOWN WITHIN THE SITE PLAN CANNOT ENCROACH INTO ROADWAYS THAT ARE DEDICATED (OR DESIGNATED) AS FIRE LANE EASEMENTS (OR CORRIDORS).

LANDSCAPE REQUIREMENTS

| AREA DESCRIPTION | REQUIREMENT | AREA/ LENGTH | # OF TREES REQUIRED | # OF TREES PROVIDED | # OF MITIGATION TREES PROVIDED | MITIGATION INCHES PROVIDED | # OF SHRUBS REQUIRED | # OF SHRUBS PROVIDED |
|-------------------------------------------------|----------------------------------|--------------|---------------------|---------------------|--------------------------------|----------------------------|----------------------|------------------------|
| E. 21ST AVENUE FRONTAGE | 1 TE PER 35 LF | 589 L.F. | 17 | 10 | 0 | 0.0 | 0 | 92 SHRUBS; 6 GRASSES |
| MONTVIEW BOULEVARD FRONTAGE | 1 TE PER 35 LF | 139 L.F. | 4 | 6 + EXISTING | 2 | 8.0 | 0 | 4 SHRUBS; 0 GRASSES |
| PARKING LOT BUFFER | 5' MIN. WIDTH | 428 L.F. | | 3+ 1 EXISTING | 0 | 0.0 | 0 | 96 SHRUBS; 106 GRASSES |
| BUILDING PERIMETER (NORTH) | 1 TE PER 40 LF | 105 L.F. | 3 | 0 | 0 | 0.0 | 0 | 30 SHRUBS; 28 GRASSES |
| BUILDING PERIMETER (SOUTH) | 1 TE PER 40 LF | 121 L.F. | 4 | 0 | 0 | 0.0 | 0 | 51 SHRUBS; 27 GRASSES |
| BUILDING PERMITER (EAST) | 1 TE PER 40 LF | 45 L.F. | 2 | 0 | 0 | 0.0 | 0 | 11 SHRUBS; 24 GRASSES |
| BUILDING PERIMETER (WEST) | 1 TE PER 40 LF | 116 L.F. | 3 | 0 | 0 | 0.0 | 0 | 25 SHRUBS; 27 GRASSES |
| DETENTION POND* | 1 TREE AND 10 SHRUBS PER 4000 SF | NA | 0 | 0 | 0 | 0.0 | 0 | 0 SHRUBS; |
| * REMOVED AS A PART OF BIOSCIENCE 3 DEVELOPMENT | | | | | | TOTAL: | 8.0 | |

WATER USE TABLE

| AREA DESCRIPTION | WATER CONSERVING IRRIGATION (NON-SOD) | NON-WATER CONSERVING IRRIGATION (SOD) |
|-----------------------------|---------------------------------------|---------------------------------------|
| E. 21ST AVENUE FRONTAGE | 2,764 S.F. | 15,467 S.F. |
| MONTVIEW BOULEVARD FRONTAGE | 0 S.F. | 1,004 S.F. |
| PARKING LOT | 6,228 S.F. | 0 S.F. |
| BUILDING PERIMETER | 4,900 S.F. | 309 S.F. |
| DETENTION POND | 12,755 S.F. | 0 S.F. |

LANDSCAPE PLANT LIST

| (AMENDMENT) | SYM. | COMMON NAME | BOTANICAL NAME | SIZE & COND. | WATER REQMT. |
|--------------------------|------|-------------|--------------------------------|------------------------------------------|-----------------|
| DECIDUOUS TREES | | | | | |
| (UNLESS OTHERWISE NOTED) | | | | | |
| 0 | 10 | MAR | MARSHALL'S SEEDLESS ASH | FRAXINUS PENNSYLVANICA 'MARSHALL'S ASH' | 3" CAL. B&B L |
| 0 | 3 | RAD | RADIANT CRABAPPLE | MALUS x 'RADIANT' | 2.5" CAL. B&B M |
| 4 | 0 | IMP | IMPERIAL HONEYLOCUST | GLEDITSIA TRIACANTHOS INERMIS 'IMPERIAL' | 3" CAL. B&B M |
| 1 | 0 | SWO | SWAMP WHITE OAK | QUERCUS BICOLOR | 3" CAL. B&B L |
| ORNAMENTAL GRASSES | | | | | |
| 45 | 0 | AVG | BLUE AVENA GRASS | HELICTOTRICHON SEMPERVIRENS | #1 CONT. L |
| 0 | 26 | DMG | DWARF MAIDEN GRASS | MISCANTHUS SINENSIS 'YAKU JIMA' | #1 CONT. L |
| 0 | 62 | FRV | VARIEGATED FEATHER REED GRASS | CALAMAGROSTIS ARUNDINACEA 'AVALANCHE' | #1 CONT. L |
| 0 | 42 | GHM | HEAVY METAL SWITCH GRASS | PANICUM VIRGATUM 'HEAVY METAL' | #1 CONT. L |
| 0 | 3 | ISG | INDIAN STEEL INDIAN GRASS | SORGHASTRUM NUTANS 'INDIAN STEEL' | #1 CONT. L |
| 0 | 93 | KFG | KOREAN FEATHER REED GRASS | CALAMAGROSTIS BRACHYTRICHA | #1 CONT. L |
| 42 | 10 | MAG | MAIDEN GRASS | MISCANTHUS SINENSIS 'GRACILLIMUS' | #1 CONT. L |
| 0 | 3 | PAH | PAMPAS GRASS | ERIANTHUS RAVENNAE | #1 CONT. L |
| 19 | 21 | RSG | RED SWITCH GRASS | PANICUM VIRGATUM 'SHENANDOAH' | #1 CONT. L |
| 46 | 0 | LBG | LITTLE BLUESTEM GRASS | SCHIZACHYRIUM SCOPARIUM | #1 CONT. L |
| DECIDUOUS SHRUBS | | | | | |
| 16 | 8 | AWS | ANTHONY WATERER SPIREA | SPIRAEA JAPONICA 'ANTHONY WATERER' | #5 CONT. L |
| 0 | 11 | BEA | BEAUTYBUSH | KOLWITZIA AMABILIS | #5 CONT. L |
| 16 | 122 | MKL | MISS KIM LILAC | SYRINGA PATULA 'MISS KIM' | #5 CONT. L |
| 0 | 61 | MLL | LITTLELEAF MOCKORANGE | PHILADELPHUS MICROPHYLLUS | #5 CONT. L |
| 9 | 32 | MSN | SNOWBELLE MOCKORANGE | PHILADELPHUS 'SNOWBELLE' | #5 CONT. L |
| 10 | 4 | NSW | SUMMER WINE NINEBARK | PHYSOCARPUS OPULIFOLIUS 'SEWARD' | #5 CONT. L |
| 0 | 31 | RSE | REGENT SERVICEBERRY | AMELANCHIER ALNIFOLIA 'REGENT' | #5 CONT. L |
| 0 | 12 | TLS | THREE LEAF SUMAC | RHUS TRILOBATA | #5 CONT. L |
| 17 | 15 | VLA | WAYFARING VIBURNUM | VIBURNUM LANTANA | #5 CONT. L |
| 6 | 36 | VMO | MOHICAN VIBURNUM | VIBURNUM LANTANA 'MOHICAN' | #5 CONT. L |
| 0 | 26 | WSC | WESTERN SAND CHERRY | PRUNUS BESSEYI | #5 CONT. L |
| 11 | 0 | QTS | TEXAS SCARLET FLOWERING QUINCE | CHAENOMELES X SUPERBA 'TEXAS SCARLET' | #5 CONT. L |
| EVERGREEN SHRUBS | | | | | |
| 5 | 76 | ARC | ARCADIA JUNIPER | JUNIPERUS SABINA 'ARCADIA' | #5 CONT. L |
| 24 | 24 | CCJ | CALGARY CARPET JUNIPER | JUNIPERUS SABINA 'CALGARY CARPET' | #5 CONT. L |
| 7 | 11 | MBT | BIG TUNA MUGO PINE | PINUS MUGO 'BIG TUNA' | #5 CONT. L |
| 0 | 22 | MCO | COMPACT OREGON GRAPE HOLLY | MAHONIA AQUIFOLIUM 'COMPACTA' | #5 CONT. L |
| 0 | 4 | PBR | BREPO PINE | PINUS NIGRA 'BREPO' | #5 CONT. L |
| 0 | 6 | TAB | TABLE TOP BLUE JUNIPER | JUNIPERUS SCOPULORUM 'TABLE TOP BLUE' | #5 CONT. L |
| 6 | 0 | SPA | SPARTAN JUNIPER | JUNIPERUS CHINENSIS 'SPARTAN' | #5 CONT. L |
| PERENNIALS | | | | | |
| 0 | 42 | BGO | BASKET OF GOLD | AURINIA SAXATILIS | #1 CONT. L |
| 0 | 20 | COZ | ZAGREB COREOPSIS | COREOPSIS VERTICILLATA 'ZAGREB' | #1 CONT. L |
| 0 | 37 | DDY | STELLA D'ORO DAYLILY | HEMEROCALLIS 'STELLA D'ORO' | #1 CONT. L |
| 0 | 29 | PCW | WHITE CREEPING PHLOX | PHLOX SUBULATA | #1 CONT. L |

IRRIGATED SEED MIX

| COMMON NAME | SCIENTIFIC NAME | VARIETY | PLS LBS PER ACRE | OUNCES PER ACRE |
|-----------------------|-------------------------------|-----------|------------------|-----------------|
| SAND BLUESTEM | ANDROPOGON HALLII | GARDEN | 3.5 | |
| SIDEOATS GRAMA | BOUTELOUA CURTIPENDULA | BUTTE | 3 | |
| PRAIRIE SANDREED | CALAMOVILFA LONGIFOLIA | GOSHEN | 3 | |
| INDIAN RICEGRASS | ORYZOPSIS HYMENOIDES | PALOMA | 3 | |
| SWITCHGRASS | PANICUM VIRGATUM | BLACKWELL | 4 | |
| WESTERN WHEATGRASS | PASCOPYRUM SMITHII | ARIBA | 3 | |
| LITTLE BLUESTEM | SCHIZACHYRIUM SCOPARIUM | PATURA | 3 | |
| ALKALI SACATON | SPOROBOLUS AIROIDES | | 3 | |
| SAND DROPSEED | SPOROBOLUS CRYPTANDRUS | | 3 | |
| *PASTURE SAGE | ARTEMISIA FRIGIDA | | | 2 |
| *BLUE ASTER | ASTER LAEVIS | | | 4 |
| *BLANKET FLOWER | GAILLARDIA ARISTATA | | | 8 |
| *PRAIRIE CONEFLOWER | RATIBIDA COLUMNIFERA | | | 4 |
| *PURPLE PRAIRIECLOVER | DALEA (PETALOSTEMUM) PURPUREA | | | 4 |
| TOTAL | | | 27.5 | 22 |

NON-IRRIGATED SEED MIX

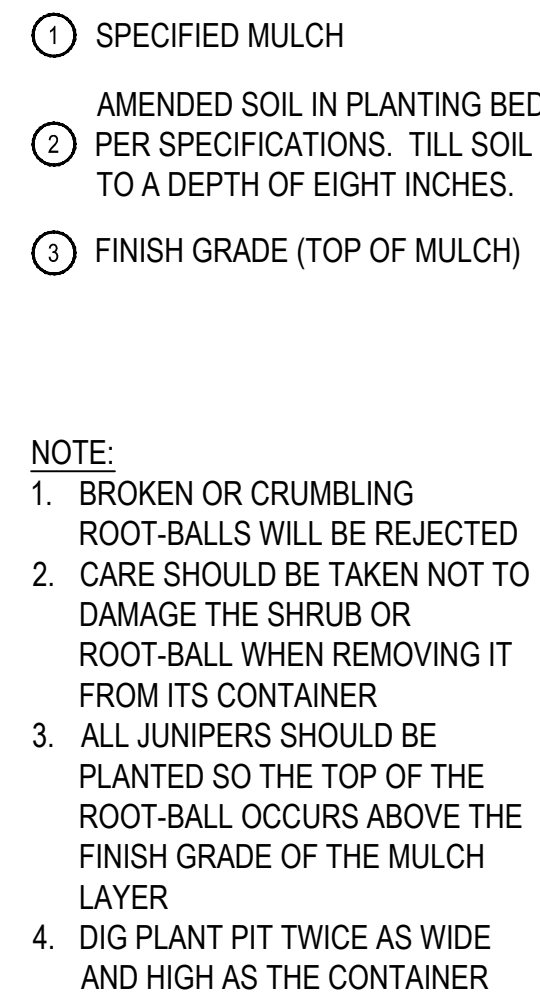
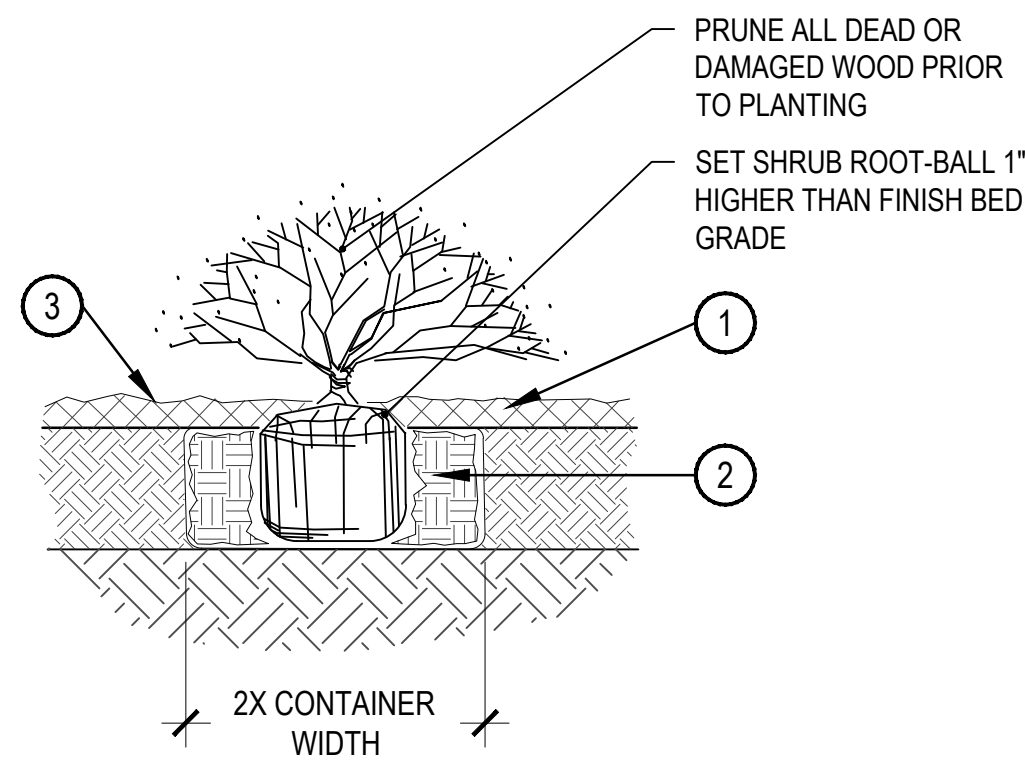
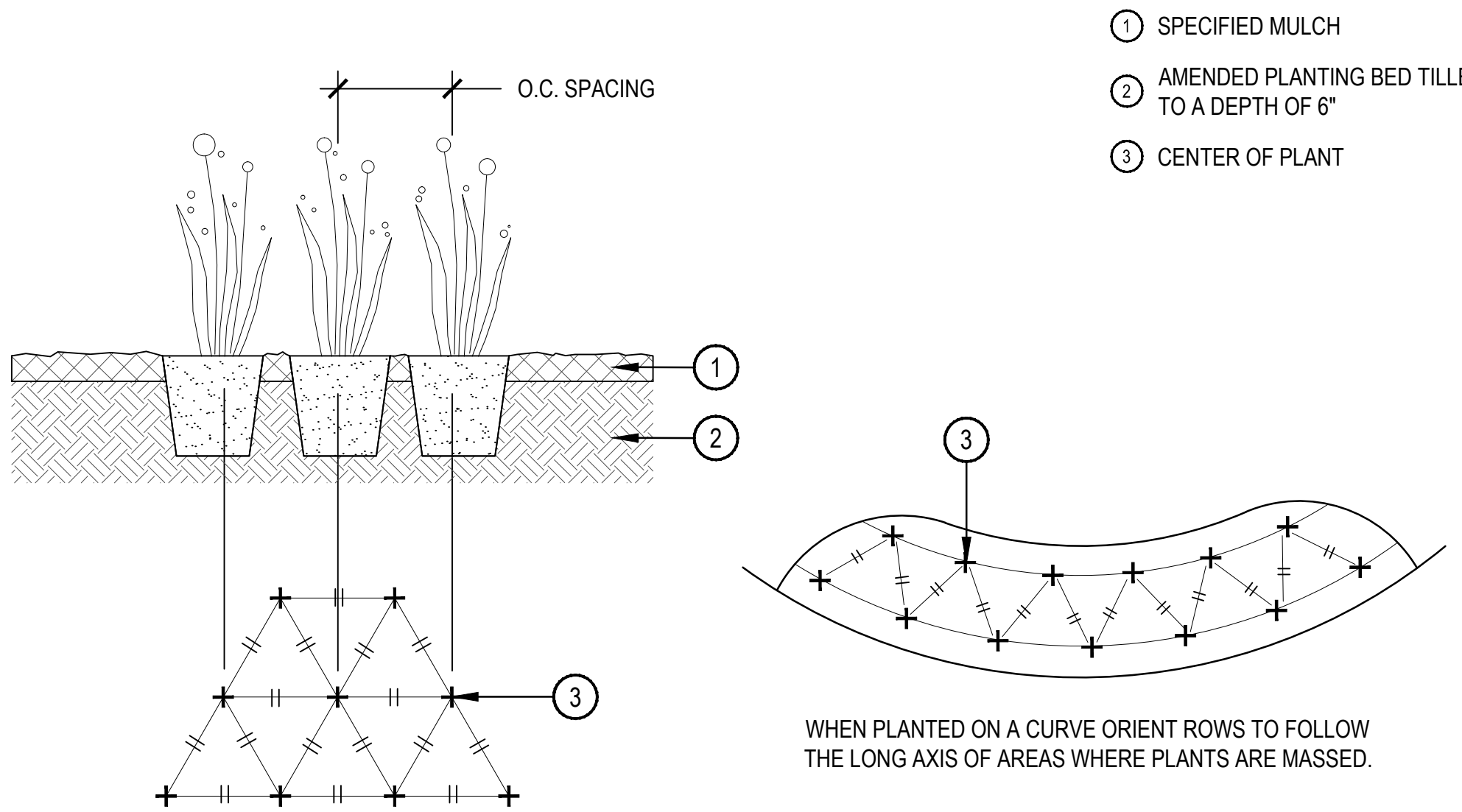
| COMMON NAME | SCIENTIFIC NAME | % OF TOTAL | PLS PER ACRE |
|--------------------|------------------------|------------|--------------|
| WESTERN WHEATGRASS | AGROPYRON SMITHII | 25% | |
| BLUE GRAMA | BOUTELOUA GRACILIS | 25% | |
| BUFFALOGRASS | BUCHLOE DACTYLOIDES | 10% | |
| GREEN NEEDLEGRASS | BOUTELOUA GRACILIS | 20% | |
| SIDEOATS GRAMA | BOUTELOUA CURTIPENDULA | 20% | |
| TOTAL | | 100% | 22.0 LBS. |

IRRIGATED TURF SEED

| COMMON NAME | % OF TOTAL | PLS PER ACRE |
|----------------------|------------|--------------|
| ELDORADO FESCUE | 20% | 6 LBS. |
| SILVERADO FESCUE | 20% | 6 LBS. |
| MONARCH TALL FESCUE | 20% | 6 LBS. |
| MONARCH SMOOTH BROME | 30% | 9 LBS. |
| BLUEGRASS MIX | 10% | 3 LBS. |
| TOTAL | 100% | 30.0 LBS. |

TURF GRASS BLEND: SOD

TEXAS BLUEGRASS BLEND BY BITTERSWEET TURF FARMS, INC., OR APPROVED EQUAL



Drawing: GR133-07
Date: 6/29/2011
Dimensions are in inches

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1 PERENNIAL PLANT LAYOUT

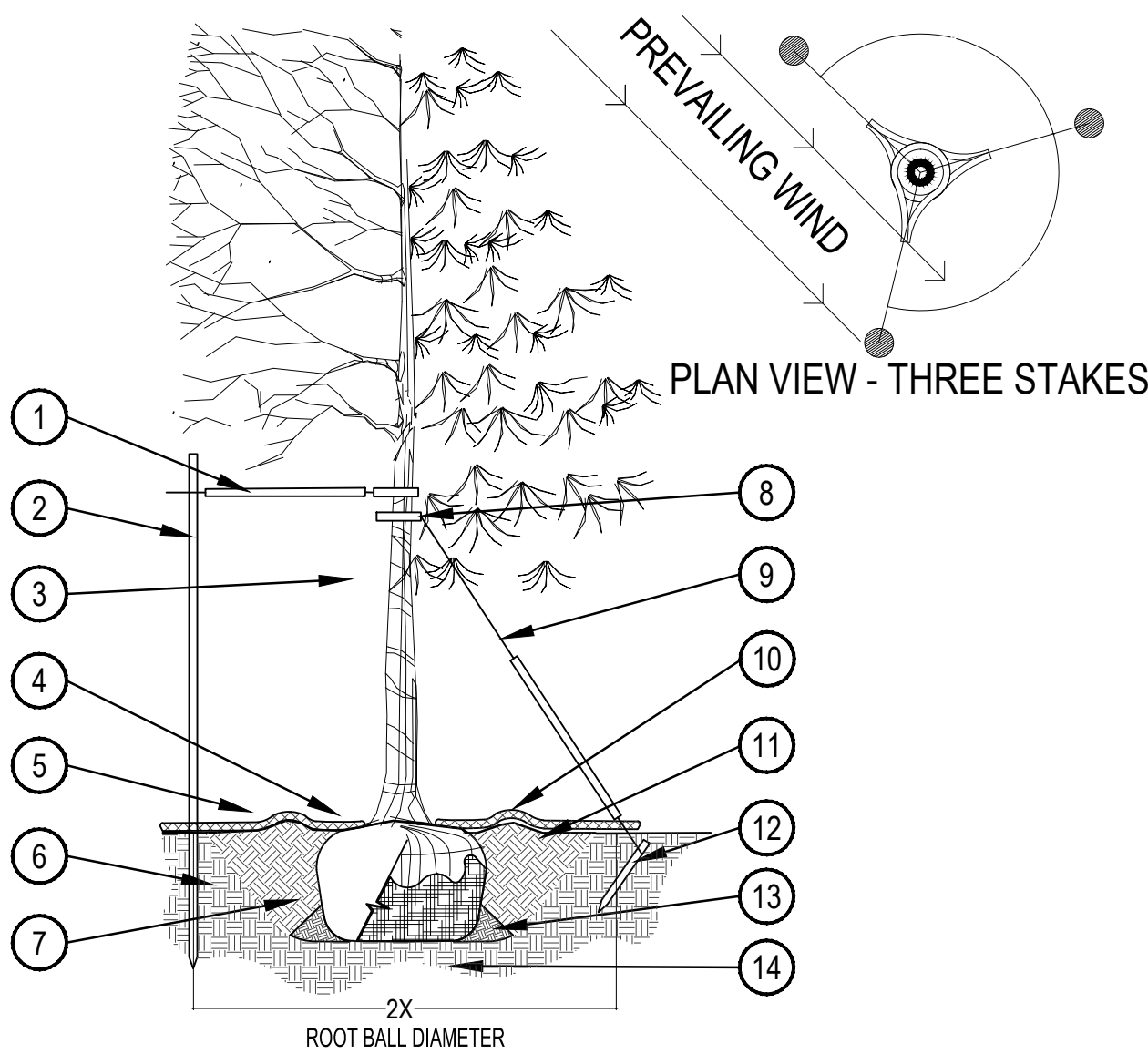
SCALE: 1" = 1'-0"

2 SHRUB PLANTING

SCALE: 1-1/2" = 1'-0"

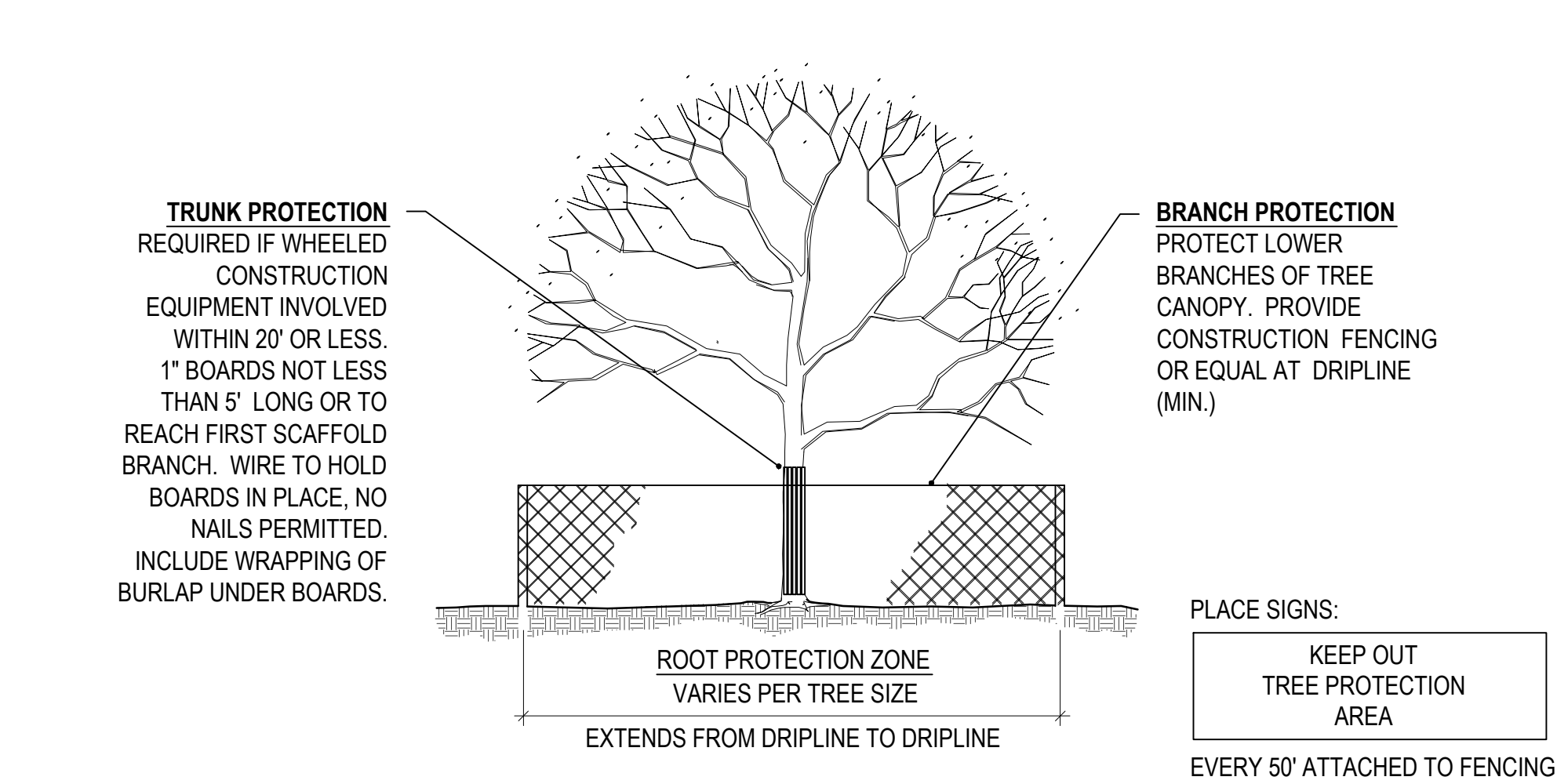
3 BENCH - LANDSCAPE FORMS GRETCHEN

SCALE: 1/2" = 1'-0"



4 TREE PLANTING DETAIL

SCALE: 3/16" = 1'-0"



TREE PROTECTION NOTES

- ALL TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE PER DETAIL. GROUPING OF MORE THAN ONE TREE MAY OCCUR.
- TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE IDENTIFIED ON THE TRUNK WITH WHITE SURVEY TAPE.
- TO PREVENT ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL NOT BE PLACED OR STORED WITHIN THE DRIP LINE OR WITHIN 15 FEET OF A TREE OR SHRUB TRUNK, WHICHEVER IS GREATER.
- TREE AND SHRUB ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE. A MAXIMUM OF TWO 3-INCH DIAMETER ROOTS PER TREE ARE PERMITTED FOR REMOVAL. THE REMOVAL OF ADDITIONAL ROOTS 3-INCHES OR GREATER IN DIAMETER REQUIRES APPROVAL OF CITY FORESTER DESIGNEE.
- TRENCHES SHALL BE HAND DUG WITHIN THE DRIP LINE IN AREAS WHERE ROOTS TWO INCHES IN DIAMETER AND GREATER ARE PRESENT, OR WHEN IN CLOSE PROXIMITY TO LOW BRANCHING TREES. WHENEVER POSSIBLE, ROOTS TWO INCHES OR GREATER IN DIAMETER SHALL BE TUNNELED OR BORED UNDER AND SHALL BE COVERED TO PREVENT DEHYDRATION.
- WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, WHEN ROOT ENERGY SUPPLIES ARE HIGH AND CONDITIONS ARE LEAST FAVORABLE FOR DISEASE CAUSING AGENTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST.
- WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR.
- AUGER TUNNELING RATHER THAN TRENCHING SHOULD BE USED FOR UTILITY PLACEMENT WITHIN DRIP LINE.
- FENCING MATERIAL SHALL ENCIRCLE ANY TREE OR SHRUB WHOSE OUTER DRIP LINE EDGE IS WITHIN 20 FEET OF ANY CONSTRUCTION ACTIVITIES.
- FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, AND A MINIMUM OF FOUR FEET IN HEIGHT.
- FENCING MATERIAL SHALL BE SET AT THE DRIP LINE OR 15 FEET FROM TREE TRUNK, WHICHEVER IS GREATER, AND MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE SHOULD BE AVOIDED FOR EXISTING TREES TO REMAIN. RETAINING WALLS AND TREE WELLS ARE ACCEPTABLE ONLY WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.
- LIMB REMOVAL SHALL BE ACCOMPLISHED BEFORE CONSTRUCTION BEGINS. A PROFESSIONAL COMPANY THAT IS LICENSED BY THE CITY OF AURORA FORESTRY DIVISION SHALL COMPLETE ALL PRUNING.

5 TREE AND SHRUB PROTECTION

SCALE: 1/8" = 1'-0"

COLORADO SCIENCE AND TECHNOLOGY
PARK AT FITZSIMONS
BIOSCIENCE PARK CENTER EXPANSION
AURORA, COLORADO

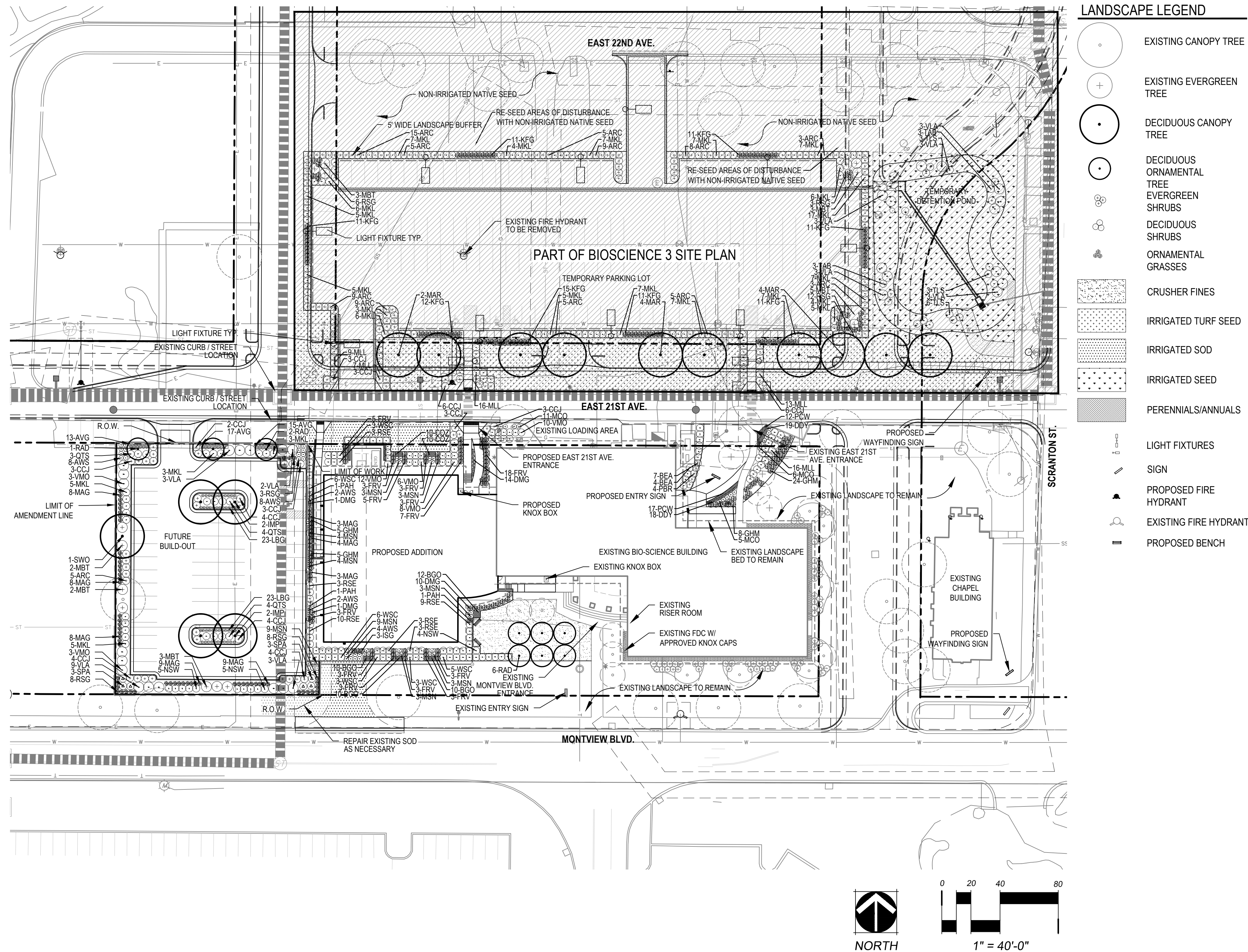
OWNER:
FITZSIMONS
REDEVELOPMENT AUTHORITY
12635 E MONTVIEW BLVD.
AURORA, CO 80045
720.589.4100

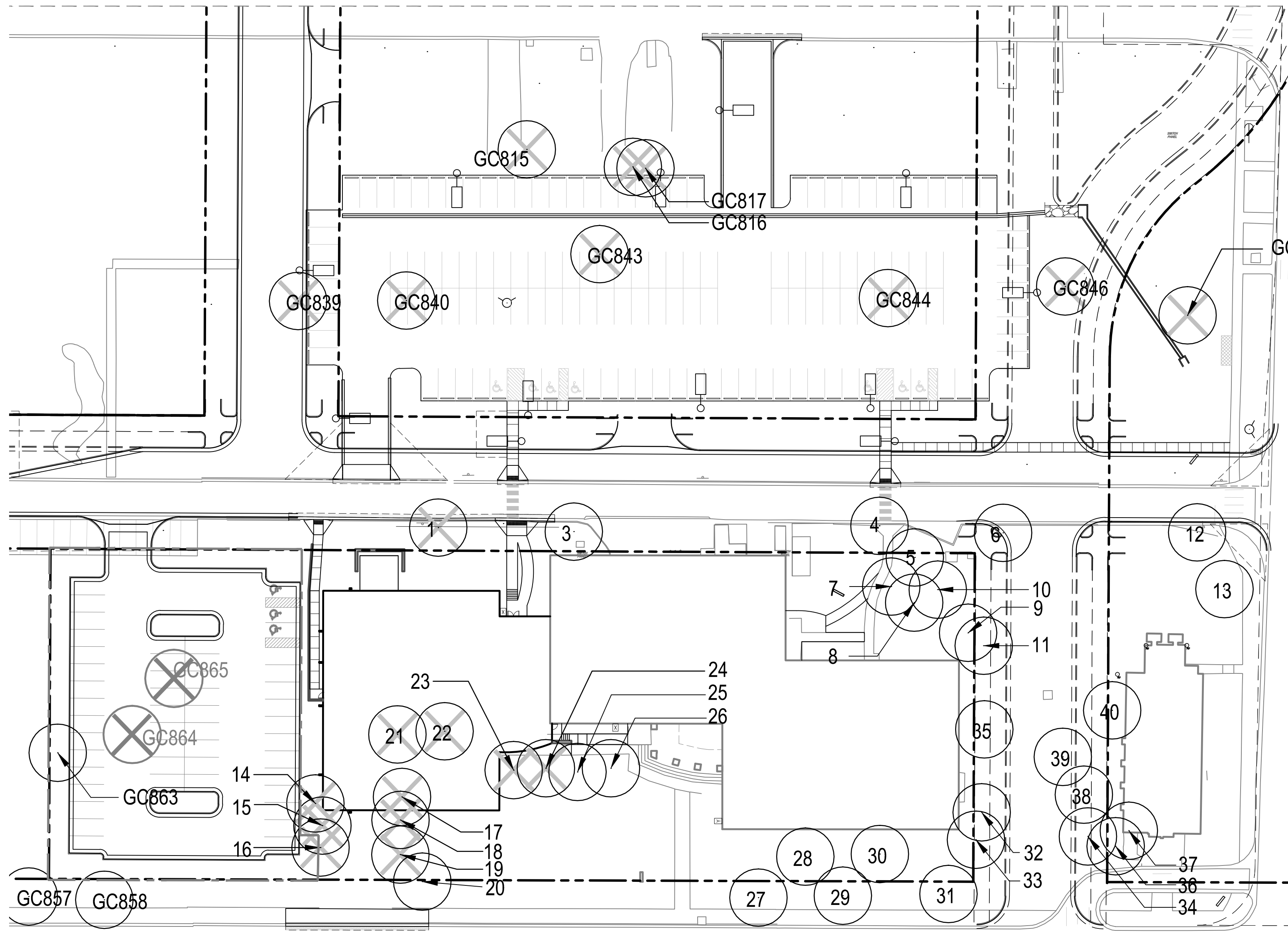
NOT FOR
CONSTRUCTION

DATE:
8.31.2017 - MINOR
AMENDMENT
10.11.2017 - RESPONSE
TO CITY COMMENTS

SHEET TITLE:
LANDSCAPE
PLAN

L1.03





TREE MITIGATION

| SITE PLAN NO. | | | | | FRA EXP |
|-----------------------------------------------------------|-----|-----------------|----------|-------------------|---------|
| INCHES NOT MITIGATED ON PREVIOUS SITE PLANS: | | | | | 602.5 |
| (CSTP SITE PLANS 1, 2, 3, 4, TCH ECC) | | | | | |
| TREES REMOVED WITH THIS SITE PLAN | | | | | |
| TREE NO. | DBH | CONDITION VALUE | COMMENTS | MITIGATION INCHES | |
| 1 | 13 | 0.35 | | 5 | |
| 14 | 10 | 0.6 | | 6 | |
| 15 | 4 | 0.85 | | 3 | |
| 16 | 4 | 0.85 | | 3 | |
| 17 | 13 | 0.35 | | 5 | |
| 18 | 3 | 0.85 | | 0 | |
| 19 | 3 | 0.85 | | 0 | |
| 21 | 6 | 0.85 | | 5 | |
| 22 | 17 | 0.6 | | 10 | |
| 23 | 4 | 0.85 | | 3 | |
| 24 | 4 | 0.85 | | 3 | |
| GC815 | 5 | 0.6 | | 3 | |
| GC816 | 18 | 0.35 | | 6 | |
| GC817 | 24 | 0.35 | | 8 | |
| GC839 | 12 | 0.35 | | 4 | |
| GC840 | 12 | 0.35 | | 4 | |
| GC843 | 28 | 0.35 | | 10 | |
| GC844 | 12 | 0.35 | | 4 | |
| GC846 | 12 | 0.35 | | 4 | |
| GC848 | 14 | 0.85 | | 12 | |
| TOTAL | | | | 98 | |
| EXISTING INCHES REMOVED FROM SITE BY THIS SITE PLAN: | | | | | 98 |
| INCHES TO BE MITIGATED: | | | | | 700.5 |
| MITIGATION INCHES PROVIDED BY TREES IN SITE PLAN FRA EXP: | | | | | 8 |
| MITIGATION INCHES CARRIED OVER TO FUTURE SITE PLANS: | | | | | 692.5 |

| SITE PLAN NO. | | | | | FRA EXP - AMEND 1 |
|-------------------------------------------------------|-----|-----------------|----------|-------------------|-------------------|
| MITIGATION INCHES CARRIED OVER ON ORIGINAL SITE PLAN: | | | | | 692.5 |
| TREES REMOVED WITH THIS SITE PLAN | | | | | |
| TREE NO. | DBH | CONDITION VALUE | COMMENTS | MITIGATION INCHES | |
| GC864 | 10 | 0.6 | | 6 | |
| GC865 | 7 | 0.6 | | 4 | |
| TOTAL | | | | 10 | |
| MITIGATION INCHES PROVIDED BY TREES: | | | | | 0 |
| MITIGATION INCHES CARRIED OVER TO FUTURE SITE PLANS: | | | | | 702.5 |

TREE MITIGATION NOTES

FOR TREES REQUIRING PROTECTION, CITY OF AURORA PARK AND OPEN SPACE DEPARTMENT TREE PROTECTION NOTES AND DETAILS SHALL BE APPLIED.