

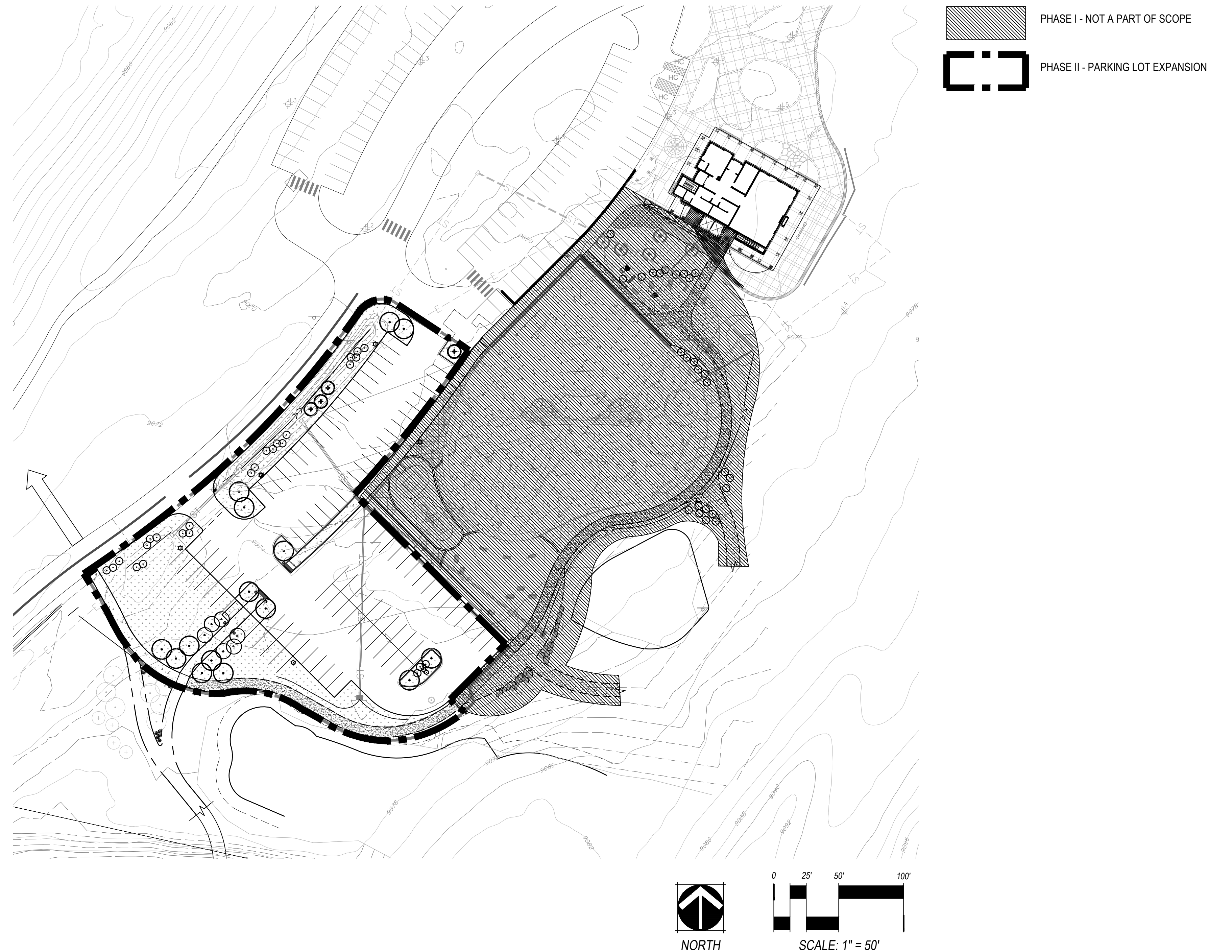
FRISCO PENINSULA RECREATION AREA PHASE II - PARKING LOT EXPANSION

CONSTRUCTION DOCUMENTS
TOWN OF FRISCO,
STATE OF COLORADO
80443

VICINITY MAP



PHASING DIAGRAM

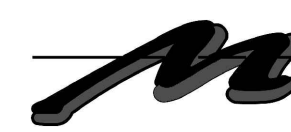


OWNER



TOWN OF FRISCO
1 MAIN STREET
FRISCO, CO 80443
CONTACT: DIANE MCBRIDE
DIRECTOR OF RECREATION & ASSISTANT
TOWN MANAGER
P: 970.668.2559

CIVIL ENGINEER



MARTIN & MARTIN
CONSULTING ENGINEERS
MARTIN & MARTIN
101 FAWCETT ROAD
SUITE 260
AVON, CO 81620
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LANDSCAPE ARCHITECT



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IRRIGATION



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FRISCO PENINSULA RECREATION AREA

TOWN OF FRISCO, COUNTY OF SUMMIT, STATE OF COLORADO

MARTIN/MARTIN, INC. GENERAL NOTES:

IN ADDITION TO THE TOWN OF FRISCO [T.O.F.] STANDARD NOTES, THE FOLLOWING SHALL APPLY:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE T.O.F. STANDARDS AND SPECIFICATIONS [LATEST REVISION]. ALL WATER & SEWER MAIN CONSTRUCTION SHALL BE SUBJECT TO T.O.F. INSPECTION.
- THE CONTRACTOR SHALL HAVE ONE [1] SIGNED COPY OF PLANS APPROVED BY THE T.O.F. AS ONE COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
- CONTRACTOR SHALL NOTIFY THE ENGINEER, OWNER AND THE T.O.F. [48]-HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE T.O.F. ENGINEERING INSPECTOR [48]-HOURS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING, BUT NOT LIMITED TO, SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE T.O.F./OWNER/ENGINEER CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
- ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [OSHA] "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, OR TO ANY EXISTING SITE IMPROVEMENTS OR STRUCTURES. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
- ALL TRENCH BACKFILL AND SUBGRADE PREPARATION SHALL BE TESTED TO ENSURE COMPLIANCE WITH GEOTECH STANDARDS AND SHALL BE TESTED AT T.O.F. REQUIRED FREQUENCIES BY A T.O.F. APPROVED PRIVATE SOILS TESTING FIRM. TEST RESULTS SHALL BE SUBMITTED TO, REVIEWED, AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO INSTALLING APPROVED BACKFILL ON PREPARED SUBGRADE. ALL BASE COURSE DENSITY SHALL ALSO BE TESTED BY THE PRIVATE SOILS FIRM AT T.O.F. REQUIRED FREQUENCIES TO ENSURE COMPLIANCE WITH T.O.F. REQUIREMENTS. BASE COURSE TEST RESULTS SHALL ALSO BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO BACKFILLING. TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE T.O.F. ENGINEERING DIVISION PRIOR TO INITIATION OF THE REQUIRED [2] YEAR WARRANTY PERIOD.
- CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY RULES AND REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED. REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTORS EXPENSE, INCLUDING BUT NOT LIMITED TO UNIDENTIFIED UNDERGROUND UTILITIES.
- EXISTING FENCES, TREES, SIDEWALKS, CURBS AND GUTTERS, LANDSCAPING, STRUCTURES, AND IMPROVEMENTS DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR RESTORED IN LIKE KIND AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE INDICATED ON THESE PLANS.
- CONTRACTOR SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A SITE OF ONE-HALF ACRE OR MORE, OR LESS THAN ONE-HALF ACRE AND PART OF A LARGER DEVELOPMENT. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE T.O.F. PRIOR TO THE START OF CLEARING, GRADING OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
- IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION AND DEWATERING FROM THE TRENCH TO STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES IS NECESSARY, THE CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WHERE A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE T.O.F. PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STORM RUNOFF AND ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ADJUTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, THE T.O.F., AND THE GEOTECHNICAL ENGINEER AT THE TIME OF OCCURRENCE. REFER TO THE DETAILS WITHIN THIS PLAN SET FOR REQUIRED TRENCH BEDDING IN THE EVENT GROUNDWATER IS ENCOUNTERED IN THE WATER LINE TRENCH.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING AND VERIFYING ELEVATIONS OF ALL EXISTING WATER MAINS AND OTHER IMPROVEMENTS AT THE POINT OF CONNECTION SHOWN ON THE PLANS, AND AT ANY UTILITY CROSSINGS PRIOR TO INSTALLING ANY OF THE NEW IMPROVEMENTS. IF A CONFLICT EXISTS AND/OR A DESIGN MODIFICATION IS REQUIRED, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO MODIFY THE DESIGN.
- PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES AND COORDINATE SCHEDULES.
- ALL PUBLIC IMPROVEMENT WORK, INCLUDING CORRECTION WORK, SHALL BE INSPECTED BY A T.O.F. REPRESENTATIVE WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION WHEN STANDARD CONSTRUCTION PRACTICES ARE NOT BEING ADHERED TO. THE T.O.F. RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS ENGINEERING CODE OF STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS. CONTRACTOR IS RESPONSIBLE FOR BEING AWARE OF, NOTIFYING, COORDINATING AND SCHEDULING ALL INSPECTIONS REQUIRED FOR FINAL APPROVALS AND PROJECT ACCEPTANCE.
- RECORD DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND OWNER PRIOR TO INITIATION OF THE REQUIRED 2-YEAR WARRANTY PERIOD. THE RECORD DRAWINGS WILL CONSIST OF A MARKED-UP SET OF "ISSUED FOR CONSTRUCTION" DRAWINGS VERIFYING THE FOLLOWING:
 - ALL LENGTHS, SIZES, AND MATERIALS OF INSTALLED PIPE, MANHOLES, AND ANY OTHER IMPROVEMENT.
 - HORIZONTAL LOCATIONS EITHER BY STATION AND OFFSET, OR BY NORTHING AND EASTING COORDINATES OF ALL BENDS, VALVES, STUBS, PLUGS, TEES, ETC.
 - TOP OF PIPE ELEVATION AT REGULAR INTERVALS AND/OR FITTINGS FOR WATER LINES.
 - ANY OTHER VARIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE CLEARLY NOTED AND DETAILED ON THE PLANS.
 - AS-BUILT FIELD NOTES, FROM WHICH THE AS-BUILT DRAWINGS ARE PREPARED, ARE TO BE PROVIDED AND STAMPED/SIGNED AND DATED BY A COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR.
- THE CONTRACTOR SHALL WARRANT ALL WORK TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF 2-YEARS FROM THE DATE OF ACCEPTANCE INTO THE WARRANTY PERIOD OF ALL CONSTRUCTION CALLED FOR BY THE PUBLIC IMPROVEMENTS AGREEMENT WITH THE T.O.F..
- DURING CONSTRUCTION AND UPON COMPLETION OF CONSTRUCTION, THE SITE SHALL BE CLEANED AND RESTORED TO A CONDITION EQUAL TO, OR BETTER THAN, THAT WHICH EXISTED BEFORE CONSTRUCTION.
- THE OWNER/DEVELOPER AND/OR THEIR ASSIGNS SHALL IMPLEMENT A ROUTINE AND DILIGENT MAINTENANCE PLAN TO MAINTAIN PROPER GRADING AND DRAINAGE.
- MARTIN/MARTIN RECOMMENDS A GEOTECHNICAL ENGINEERING SITE REVIEW AND OBSERVES/TESTS ALL REQUIRED EXCAVATION AND BACKFILL COMPACTION. OWNER AND CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL REPRESENTATIVES.

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Sheet Number	Sheet Title
C-001	GENERAL NOTES
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C-200	CIVIL SITE PLAN
C-201	CIVIL LINE & CURVE TABLES
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C-400	STORM SEWER PLAN
C-500	EROSION CONTROL PLAN
C-501	EROSION CONTROL DETAILS
C-502	EROSION CONTROL DETAILS

EXISTING	LEGEND	PROPOSED
	PROPERTY LINE	
	RIGHT-OF-WAY LINE	
	SECTION LINE	
	EASEMENT	
	RETAINING WALL	
	CURB & GUTTER	
	CURB & GUTTER (SPILL)	
	CURB & GUTTER (CATCH)	
	CONTOURS	
	UTILITY CROSSING	
	STORM SEWER	
	STORM MANHOLE	
	ROOF DRAIN	
	STORM INLET	
	FLARED END SECTION	
	SANITARY SEWER	
	SANITARY MANHOLE	
	CLEAN OUT	
	WATER LINE	
	WATER VALVE	
	FIRE HYDRANT	
	WATER METER	
	IRRIGATION LINE	
	IRRIGATION CONTROL	
	OVERHEAD ELECTRIC	
	ELECTRIC LINE	
	LIGHT POLE	
	POWER POLE	
	ELECTRIC METER	
	TELEPHONE LINE	
	TELEPHONE PEDESTAL	
	CABLE TV	
	GAS LINE	
	FIBER OPTIC	
	MONITOR WELL	
	SIGN	
	DIRECTION OF FLOW	
	GRADING ARROW	
	DECIDUOUS TREE	
	EVERGREEN TREE	
	BUSH/SHRUB	
	SPOT ELEVATIONS	
	DRIVE	

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FRISCO PENINSULA RECREATION AREA

No.	Issue / Revision	Date	Name

Job Number	MC18.0378
Project Manager	LML
Design By	REJ
Drawn By	REJ
Principal In Charge	LML

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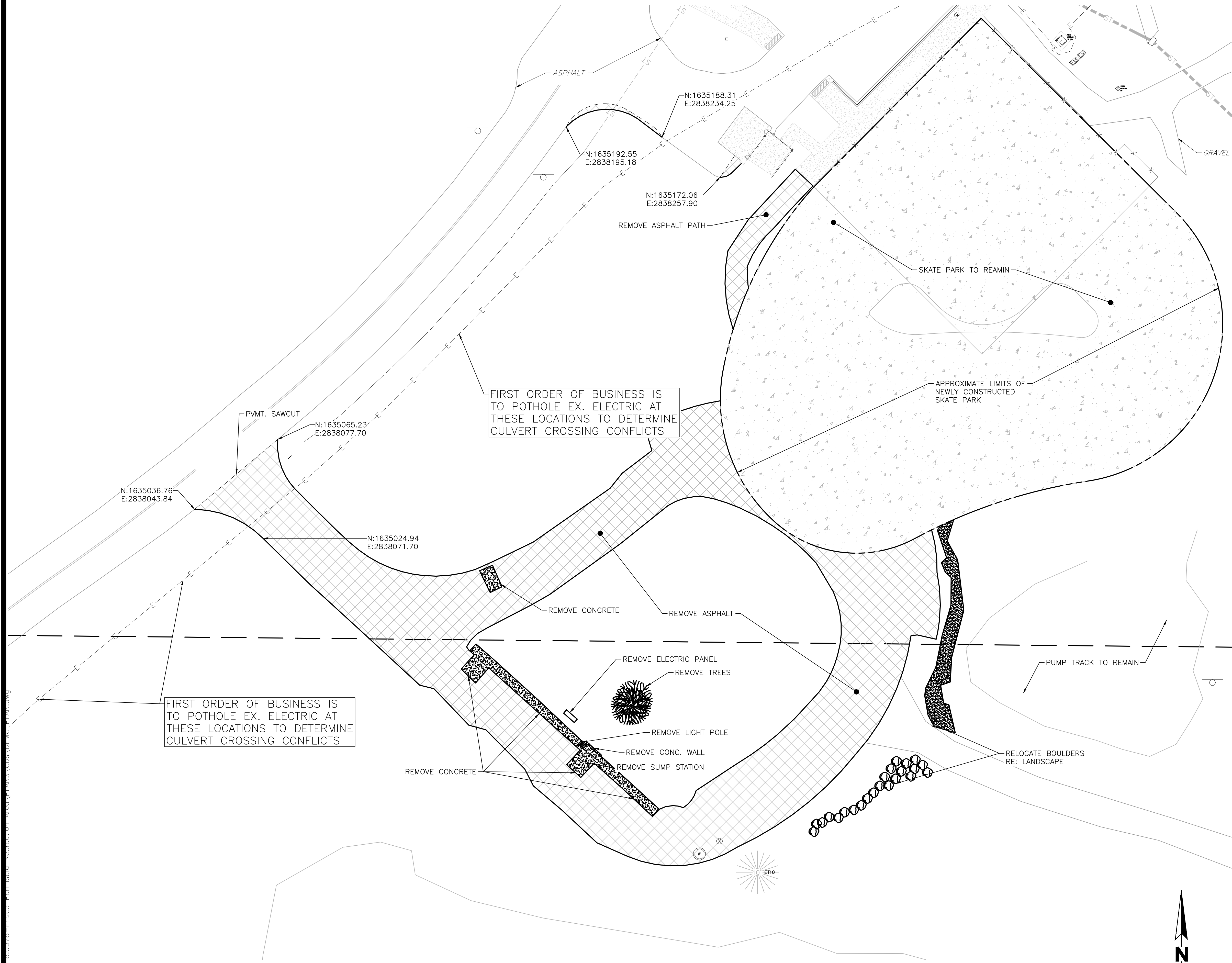
CALL 811 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES

MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM (PROVIDED) ASCE (38) UTILITY QUALITY LEVEL-D (Q_{UD}) AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES (DEPICTED OR NOT DEPICTED) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

Sheet Number:

C-001

PLOT DATE: Tuesday, April 9, 2019 1:22 PM LAST SAVED BY: DVERRATTI
 PROJECT: C:\Users\jmc18\OneDrive\Documents\Projects\811\DEMOS\DEMOS\CDs\DEMO PLAN.dwg



EXISTING		DEMOLITION	
	PROPERTY LINE		PROPERTY LINE
	RIGHT-OF-WAY LINE		RIGHT-OF-WAY LINE
	SECTION LINE		SECTION LINE
	EASEMENT		EASEMENT
	RETAINING WALL		RETAINING WALL
	CURB & GUTTER		CURB & GUTTER
	ASPHALT		ASPHALT
	CONCRETE/ SIDEWALK		CONCRETE/ SIDEWALK
	CONTOURS		CONTOURS
	STORM SEWER		STORM SEWER
	STORM MANHOLE		STORM MANHOLE
	STORM INLET		STORM INLET
	FLARED END SECTION		FLARED END SECTION
	SANITARY SEWER		SANITARY SEWER
	SANITARY MANHOLE		SANITARY MANHOLE
	WATER LINE		WATER LINE
	WATER VALVE		WATER VALVE
	FIRE HYDRANT		FIRE HYDRANT
	WATER METER		WATER METER
	IRRIGATION LINE		IRRIGATION LINE
	IRRIGATION CONTROL		IRRIGATION CONTROL
	OVERHEAD ELECTRIC		OVERHEAD ELECTRIC
	ELECTRIC LINE		ELECTRIC LINE
	LIGHT POLE		LIGHT POLE
	POWER POLE		POWER POLE
	ELECTRIC METER		ELECTRIC METER
	TELEPHONE LINE		TELEPHONE LINE
	TELEPHONE PEDESTAL		TELEPHONE PEDESTAL
	CABLE TV		CABLE TV
	SIGN		SIGN
	DECIDUOUS TREE		DECIDUOUS TREE
	EVERGREEN TREE		EVERGREEN TREE
	BUSH/SHRUB		BUSH/SHRUB
	GAS LINE		GAS LINE
	DRIVE		DRIVE



CALL 811 2-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE OR EXCAVATE FOR
 MARKING OF UNDERGROUND MEMBER UTILITIES

MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY
 LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN
 PLOTTED FROM (PROVIDED) ASCE (38) UTILITY QUALITY LEVEL D
 (Q_U) AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS
 RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL
 AND VERTICAL LOCATION OF ALL UTILITIES (DEPICTED OR NOT
 DEPICTED) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

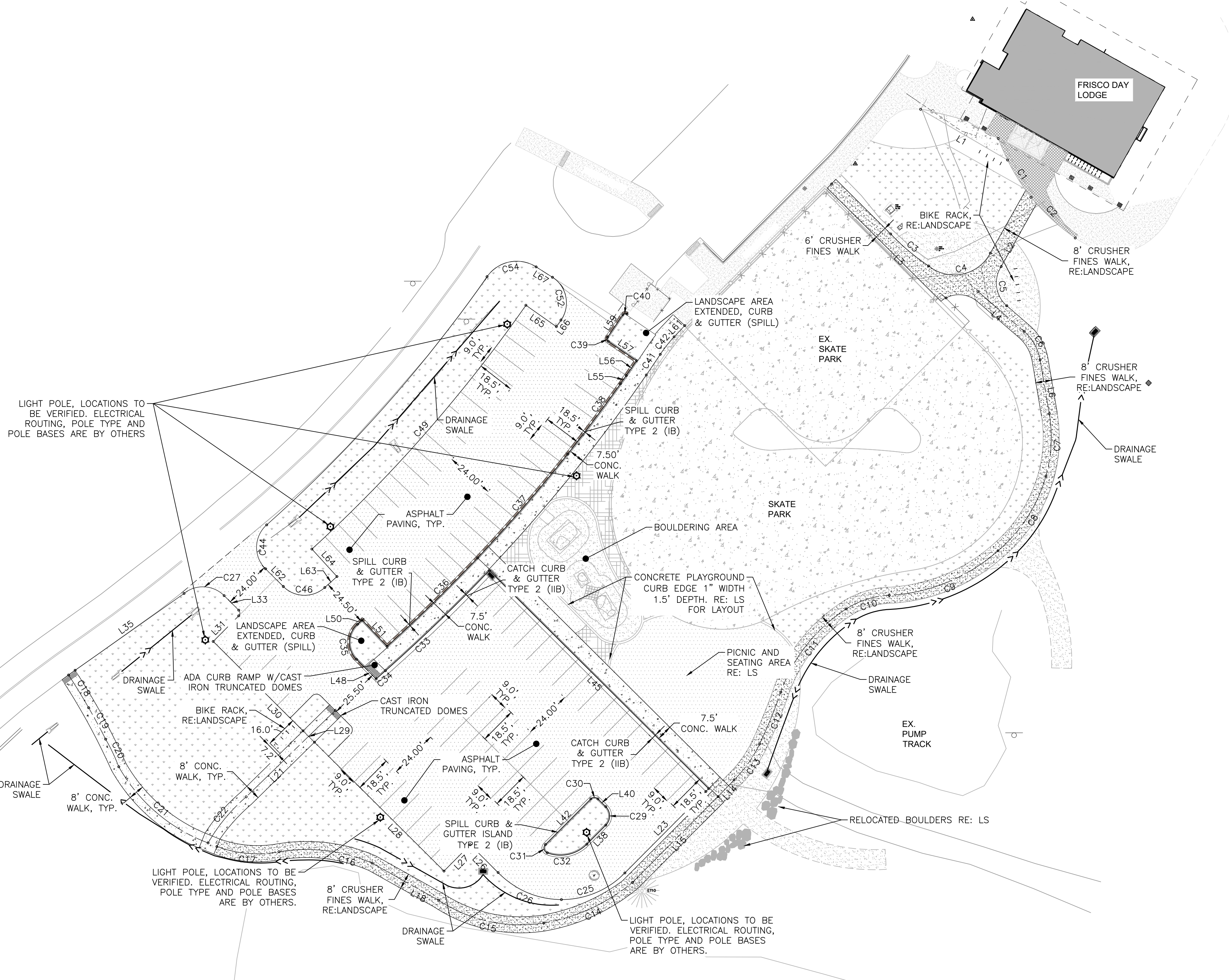
**FRISCO PENINSULA
 RECREATION AREA**
 DEMOLITION PLAN

No.	Issue / Revision	Date	Name

Job Number: MC18.0378
 Project Manager: LML
 Design By: REJ
 Drawn By: REJ
 Principal in Charge: LML

Sheet Number:
C-100

PLOT DATE: Tuesday, April 9, 2019 1:22 PM LAST SAVED BY: DVERRATTI
 PROJECT: C:\Users\cds\Documents\Civil\Projects\2018\FRISCO PENINSULA RECREATION AREA\CIVIL SITE PLAN.dwg
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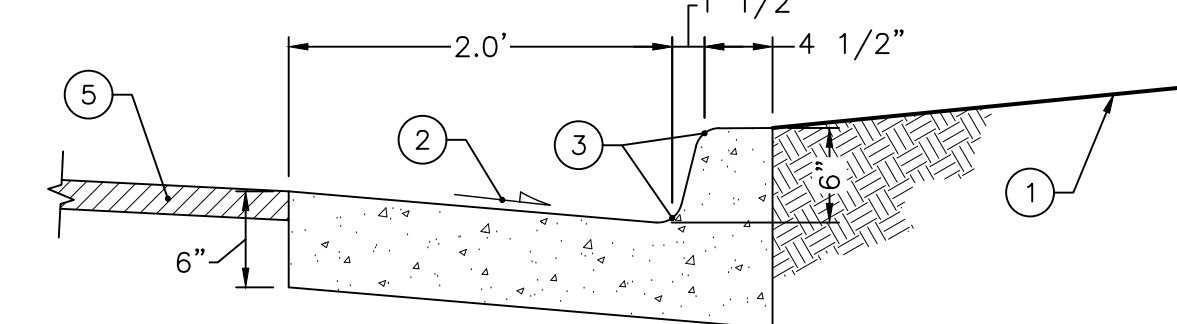
LEGEND

EXISTING	PROPERTY LINE	PROPOSED
---	RIGHT-OF-WAY LINE	- - - - -
---	SECTION LINE	- - - - -
---	EASEMENT	- - - - -
---	CURB & GUTTER	- - - - -
---	CURB & GUTTER (SPILL)	- - - - -
---	CURB & GUTTER (CATCH)	- - - - -
DRIVE	DESCRIPTIONS	DRIVE
CONCRETE WALK: 4" CDOT CLASS B CONCRETE OVER 3" COMPACTED CDOT CLASS 6 BASE, OR MATCH EXISTING SECTION		
ASPHALT PAVEMENT: 4" HMA OVER 5" COMPACTED CDOT CLASS 6 BASE		

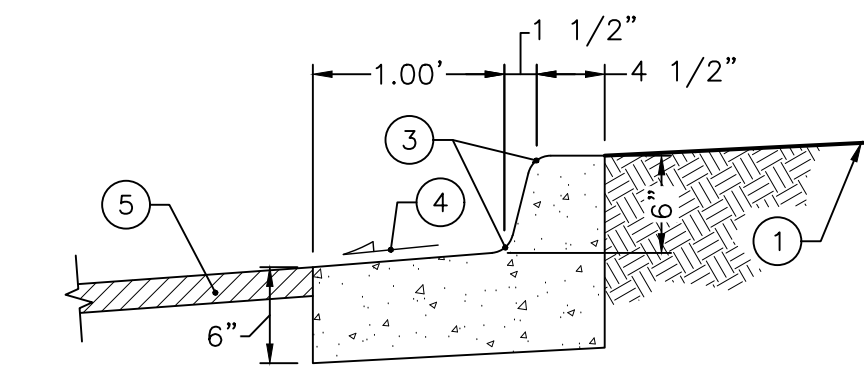
ALL ASPHALT, CONCRETE, CURB AND GUTTER SUBGRADE TO BE RECONDITIONED TO 1' DEPTH. SCARIFY AND COMPACT TO A MINIMUM OF 95% OF STD PROCTOR MAXIMUM DRY DENSITY PER ASTM D-698 TO WITHIN 0% TO PLUS 2% OF OPTIMUM MOISTURE CONTENT.

- PAVING SECTION NOTES:
- PAVING SECTIONS TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
 - ALL STRIPING TO BE PLACED BY TOWN OF FRISCO.

- NOTES:
- BACKFILL, SEE DETAIL OF CUT/FILL SLOPE
 - SLOPE AT 1" PER FOOT
 - 1 1/2" RADIUS TYPICAL
 - SLOPE AT 1/2" PER FOOT.
 - PAVEMENT, SEE TYPICAL PAVEMENT SECTION



TYPE 2 (IIB)



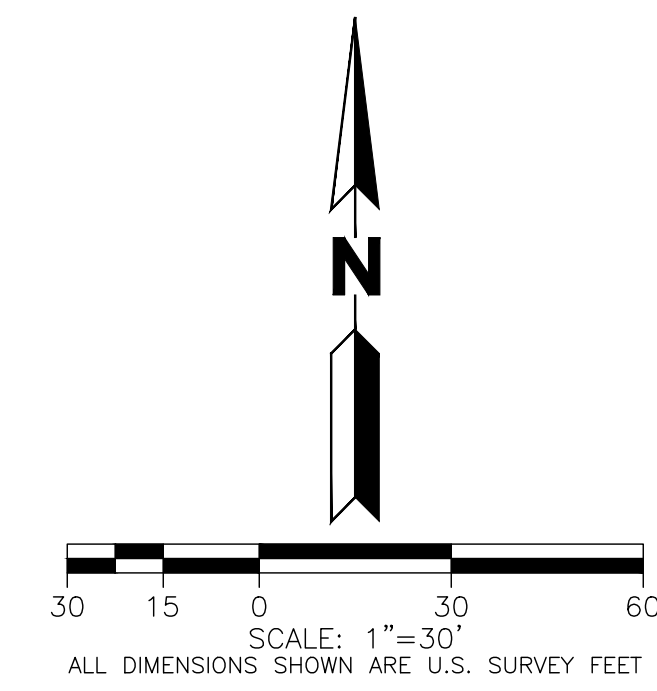
TYPE 2 (IB)

6 INCH VERTICAL CURB AND GUTTER

NOT TO SCALE
M/M 2009



CALL **811** 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES
 MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM (PROVIDED) ASCE (38) UTILITY QUALITY LEVEL-D (Q_U) AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES (DEPICTED OR NOT DEPICTED) PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



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FRISCO PENINSULA RECREATION AREA
 CIVIL SITE PLAN

No.	Issue / Revision	Date	Name

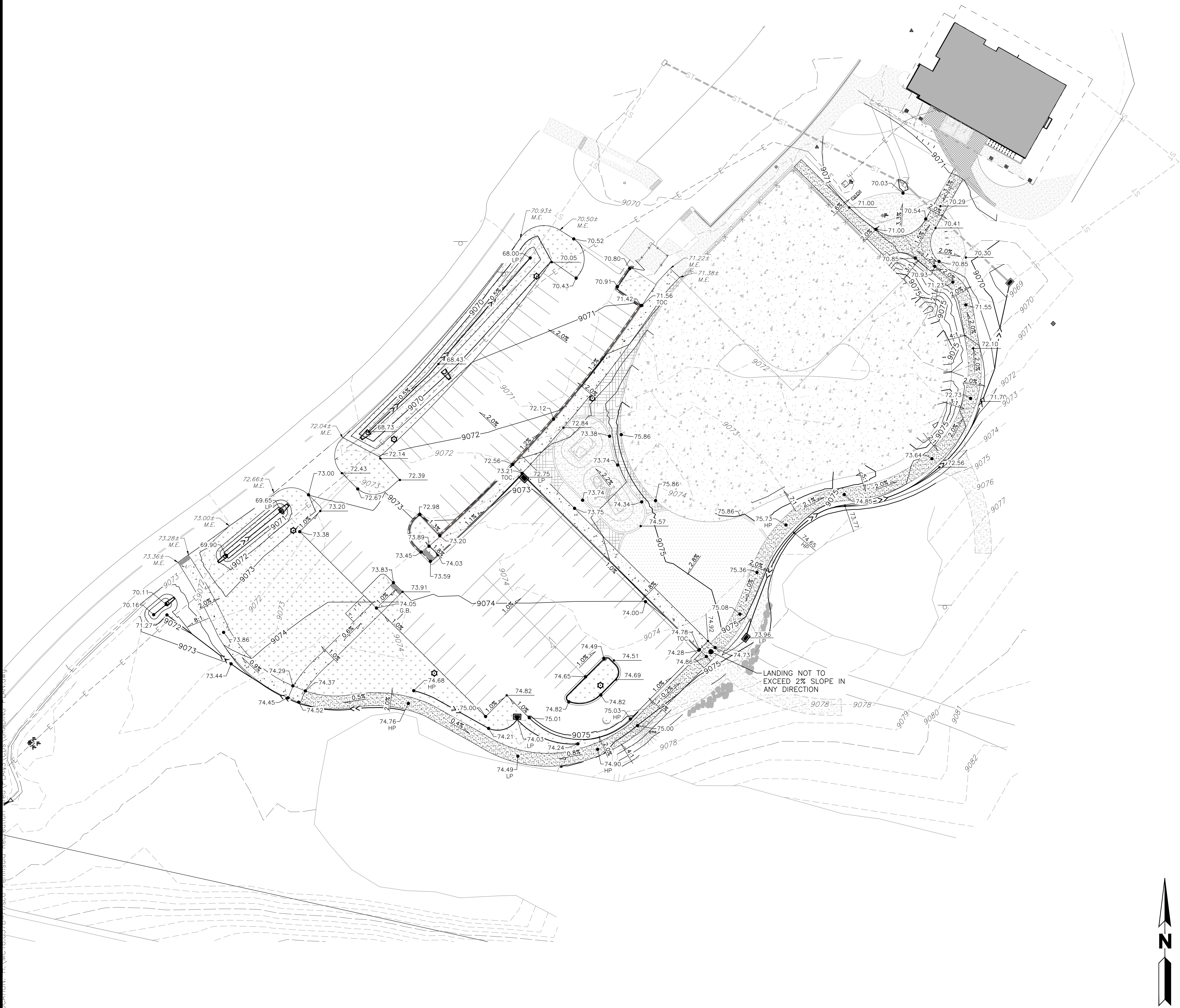
Job Number	MC18.0378
Project Manager	LML
Design By	REJ
Drawn By	REJ
Principal in Charge	LML

Sheet Number:

C-200

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PLOT DATE: Tuesday, April 9, 2019 1:23 PM LAST SAVED BY: DVERRATTI
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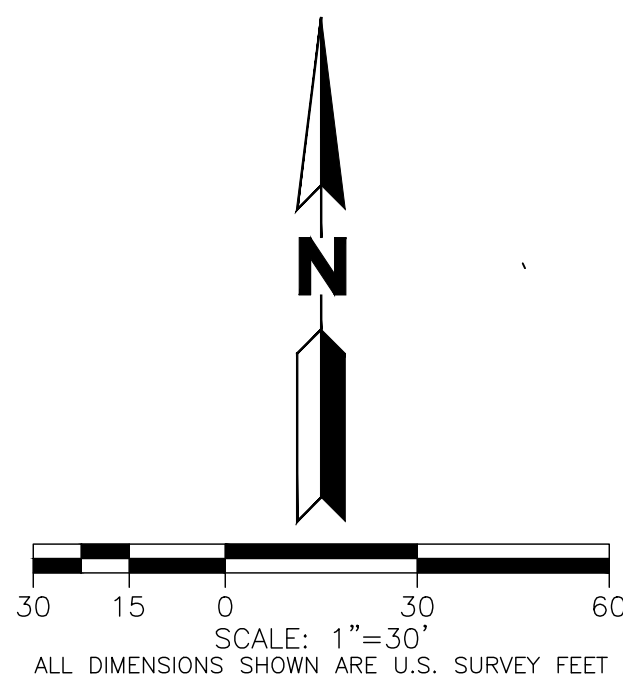
LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	RIGHT-OF-WAY LINE	---
---	SECTION LINE	---
---	EASEMENT	---
---	RETAINING WALL	---
---	CURB & GUTTER	---
---	CONTOURS	---
---	STORM SEWER	---
⊙	STORM MANHOLE	⊙
---	ROOF DRAIN	---
□	INLET	□
<	FLARED END SECTION	△
+	SIGN	+
→	GRADING ARROW	→
○	DECIDUOUS TREE	○
⊙	EVERGREEN TREE	⊙
⊙	BUSH/SHRUB	⊙
---	DRIVE	---
•	SPOT ELEVATIONS	•

GRADING NOTES:

- ALL SITE GRADING [EXCAVATION, EMBANKMENT, AND COMPACTION] SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST GEOTECHNICAL INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE TOWN OF FRISCO'S "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS," LATEST EDITION.
- ALL NEWLY CONSTRUCTED OR ALTERATIONS OF ACCESSIBILITY ROUTES (WALKS, RAMPS, ENTRANCES, ETC.) SHALL COMPLY WITH THE RULES AND REGULATIONS SET FORTH BY ADA, ADAAG, CITY, STATE, FEDERAL OR JURISDICTION HAVING AUTHORITY, INCLUDING BUT NOT LIMITED TO: 5% MAXIMUM GRADE ON WALKS WITHOUT HANDRAILS, 8.33% MAXIMUM GRADE ON WALKS WITH HANDRAILS AND LEVEL LANDINGS (MAXIMUM 2% COMPOSITE SLOPE), 2% MAXIMUM CROSS SLOPE ON WALKS AND 2% MAXIMUM COMPOSITE SLOPE IN HANDICAP PARKING/LOADING AREAS. NO TOLERANCE REGARDING MAXIMUM SLOPES WILL BE ALLOWED. DURING CONSTRUCTION, CONTRACTOR SHALL COORDINATE AS NECESSARY WITH OWNER, DEVELOPER, ENGINEER, ARCHITECT, OR DESIGNATED OFFICIAL IF RULES AND REGULATIONS OF ACCESSIBILITY ROUTES CAN NOT BE MET. IN ADDITION, OWNER IS ADVISED THAT REGULAR MAINTENANCE PROGRAMS SHOULD BE IMPLEMENTED AFTER CONSTRUCTION TO KEEP EXISTING ROUTES SAFE, USABLE, AND ADA COMPLIANT.
- EXISTING ELEVATIONS SHOWN ON THIS DRAWING HAVE BEEN DEPICTED FROM BEST AVAILABLE INFORMATION AND ARE SHOWN TO THE EXTENT KNOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING GRADE CONDITIONS AT THE LIMITS OF CONSTRUCTION AND AT LOCATIONS THAT INTERFACE WITH EXISTING OR PROPOSED STRUCTURES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT CONTRADICT THE ENGINEERS INTENT FOR DRAINAGE PATTERNS, MAXIMUM AND MINIMUM SLOPES, AND PROPOSED ELEVATIONS AS SHOWN ON THE PLAN. THE ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
- PROPOSED CONTOURS AND SPOT ELEVATIONS AS SHOWN HEREIN ARE DEFINED AS FINISHED ELEVATION AFTER PAVING, LANDSCAPING, ETC. CONTRACTOR SHALL COORDINATE WITH GEOTECH FOR PAVEMENT THICKNESS AND LANDSCAPE FOR THICKNESS OF TOPSOIL, SOD AND LANDSCAPE MATERIALS.
- ALL SPOTS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. FG = FINISHED GRADE, FF = FINISH FLOOR, HP = HIGH POINT, LP = LOW POINT, TOC = TOP OF CURB.
- TEMPORARY CUT/FILL SLOPES SHALL NOT EXCEED A STEEPNESS OF [1:1] (H:V). PERMANENT SLOPES SHALL NOT EXCEED [2:1] (H:V) [UNLESS NOTED OTHERWISE] IN AREAS TO BE SEEDED OR SODDED.
- CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED MANHOLE RIMS, VALVE BOXES, ETC. TO MATCH FINAL GRADE.

LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION



CALL 811 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES

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FRISCO PENINSULA RECREATION AREA

GRADING PLAN

No.	Issue / Revision	Date	Name

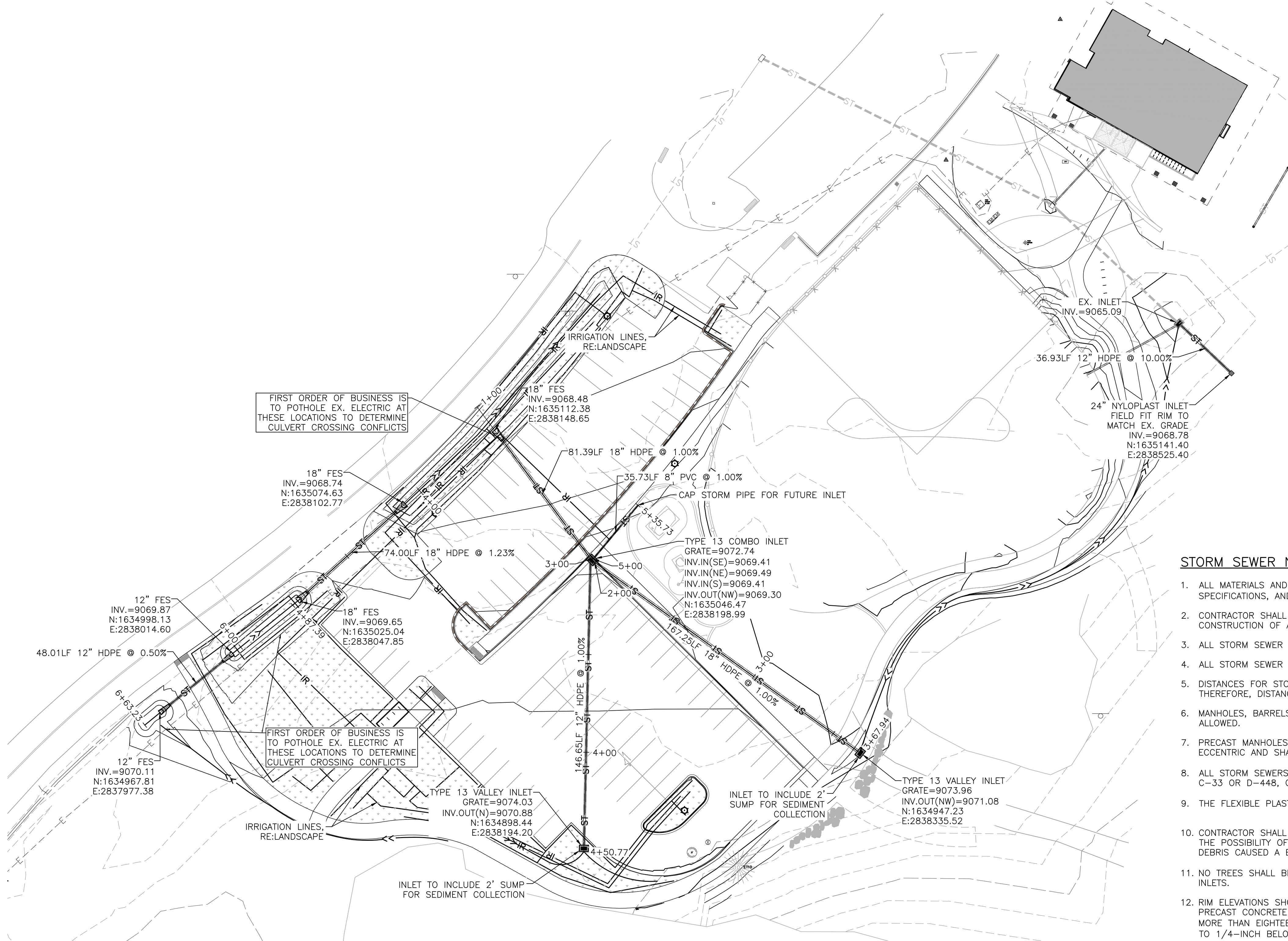
Job Number: MC18.0378
 Project Manager: LML
 Design By: REJ
 Drawn By: REJ
 Principal in Charge: LML

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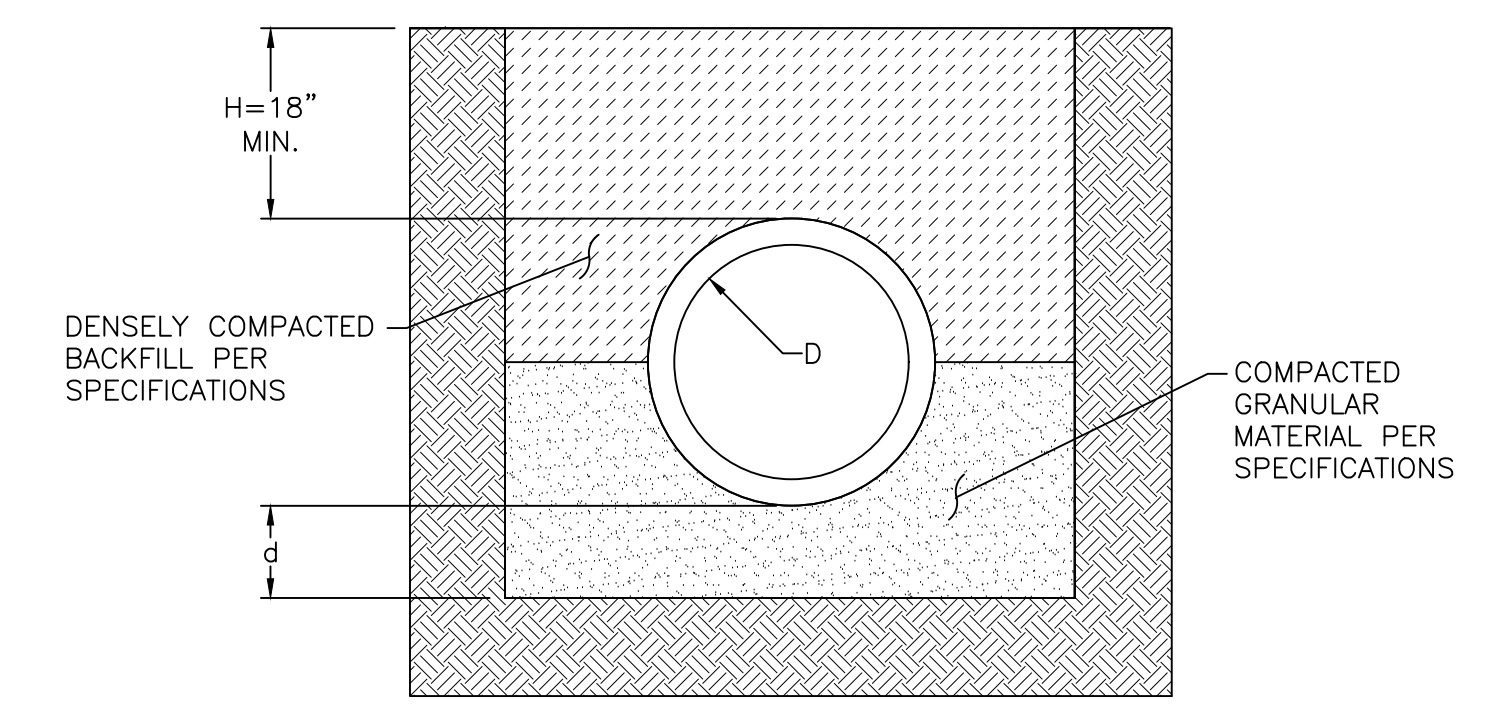
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0101 FAWCETT ROAD, SUITE 260, AVON, COLORADO 81620
 970.526.6007 MARTINMARTIN.COM



LEGEND

- D = INSIDE DIAMETER OF PIPE (I.D.)
- H = BACKFILL COVER ABOVE TOP OF PIPE
- d = DEPTH OF BEDDING MATERIAL BELOW PIPE



NOTE: FOR ROCK OR OTHER INCOMPRESSIBLE MATERIAL, THE TRENCH SHOULD BE OVER EXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR MATERIAL. BEDDING SHALL BE CLASS B.

GRANULAR BEDDING: WELL GRADED MIXTURE OF SOUND MINERAL AGGREGATE COMPLYING WITH CLASS 67 (MODIFIED) GRADATION IN ACCORDANCE WITH THE FOLLOWING TABLE:

CLASS 67 (MODIFIED) GRADATION	
NOMINAL SIZE	PERCENT PASSING BY WEIGHT
3/4"	90-100
3/8"	20-55
NO. 4	5-10
NO. 8	5-10

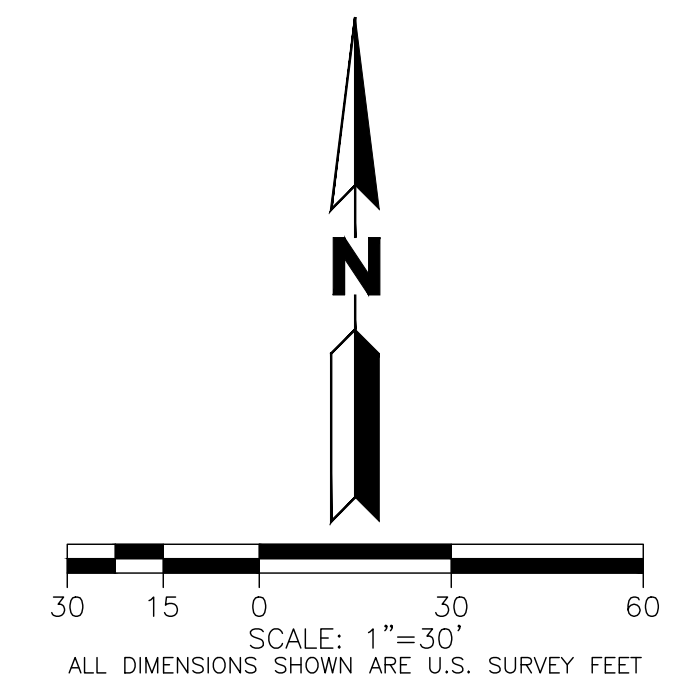
DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	d(MIN)
27" & SMALLER	3"
30" TO 60"	4"
60" & LARGER	6"

PIPE BEDDING DETAIL

NOT TO SCALE
 M/M 2009

STORM SEWER NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF FRISCO (TOF) ENGINEERING STANDARDS, MATERIAL SPECIFICATIONS, AND DRAWINGS [LATEST REVISION]. ALL STORM SEWER CONSTRUCTION SHALL BE APPROVED AND INSPECTED BY TOF.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING STORM SEWER POINTS OF CONNECTION PRIOR TO CONSTRUCTION OF ANY PROPOSED STORM SEWER.
- ALL STORM SEWER LINES SHALL BE HDPE ADS DUAL WALL N-12 PIPE OR EQUAL UNLESS OTHERWISE NOTED.
- ALL STORM SEWER PIPE JOINTS SHALL BE INSTALLED WITH AN APPROVED RUBBER GASKET O-RING OR PROFILE TYPE GASKET.
- DISTANCES FOR STORM SEWER PIPE ARE THE HORIZONTAL DISTANCES FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE WIDTHS.
- MANHOLES, BARRELS AND CONES SHALL BE CONSTRUCTED OF PRECAST CONCRETE. CAST-IN-PLACE MANHOLES SHALL NOT BE ALLOWED.
- PRECAST MANHOLES AND RISERS SHALL BE MANUFACTURED IN CONFORMITY WITH ASTM DESIGNATION C-478. ALL CONES SHALL BE ECCENTRIC AND SHALL BE ROTATED AWAY FROM ADJACENT CURB AND GUTTER.
- ALL STORM SEWERS SHALL HAVE CLASS "B" BEDDING UNLESS OTHERWISE SHOWN. BEDDING MATERIAL SHALL CONFORM TO ASTM C-33 OR D-448, GRADATION NO. 67.
- THE FLEXIBLE PLASTIC JOINT SEALING COMPOUND SHALL BE "RAMNEK," RUBBERNECK OR APPROVED EQUAL.
- CONTRACTOR SHALL IMMEDIATELY REMOVE DEBRIS DEPOSITED INTO PUBLIC MANHOLES AND OTHER PUBLIC STRUCTURES TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS CAUSING BACKUP INTO PRIVATE PROPERTIES. IF IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.
- NO TREES SHALL BE PLANTED WITHIN ANY SEWER EASEMENT OR WITHIN TEN [10] FEET OF ANY PUBLIC MANHOLES, PIPES OR INLETS.
- RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE, SUCH THAT THERE IS NO MORE THAN EIGHTEEN [18] INCHES FROM FINISHED GRADE TO THE TOP OF THE CONE SECTION. THE RIM SHALL BE LEFT 1/8-INCH TO 1/4-INCH BELOW FINISHED ASPHALT.
- STATIONING/COORDINATES SHOWN FOR TYPE 'R' INLETS IS ON FLOWLINE AT CENTER OF INLET. STATIONING/COORDINATES FOR AREA INLETS ARE AT CENTER OF INLET. STATIONING/COORDINATES FOR FLARED END SECTIONS ARE AT CENTER OF FLARED END.
- SLOPE OF INLET FLOW LINE OR GRATE TO MATCH STREET GRADE UNLESS INLET IS AT A SUMP LOCATION.
- CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF ROOF DRAIN SERVICES AND DOWNSPOUTS WITH PLUMBING AND ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.



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FRISCO PENINSULA RECREATION AREA

STORM SEWER PLAN

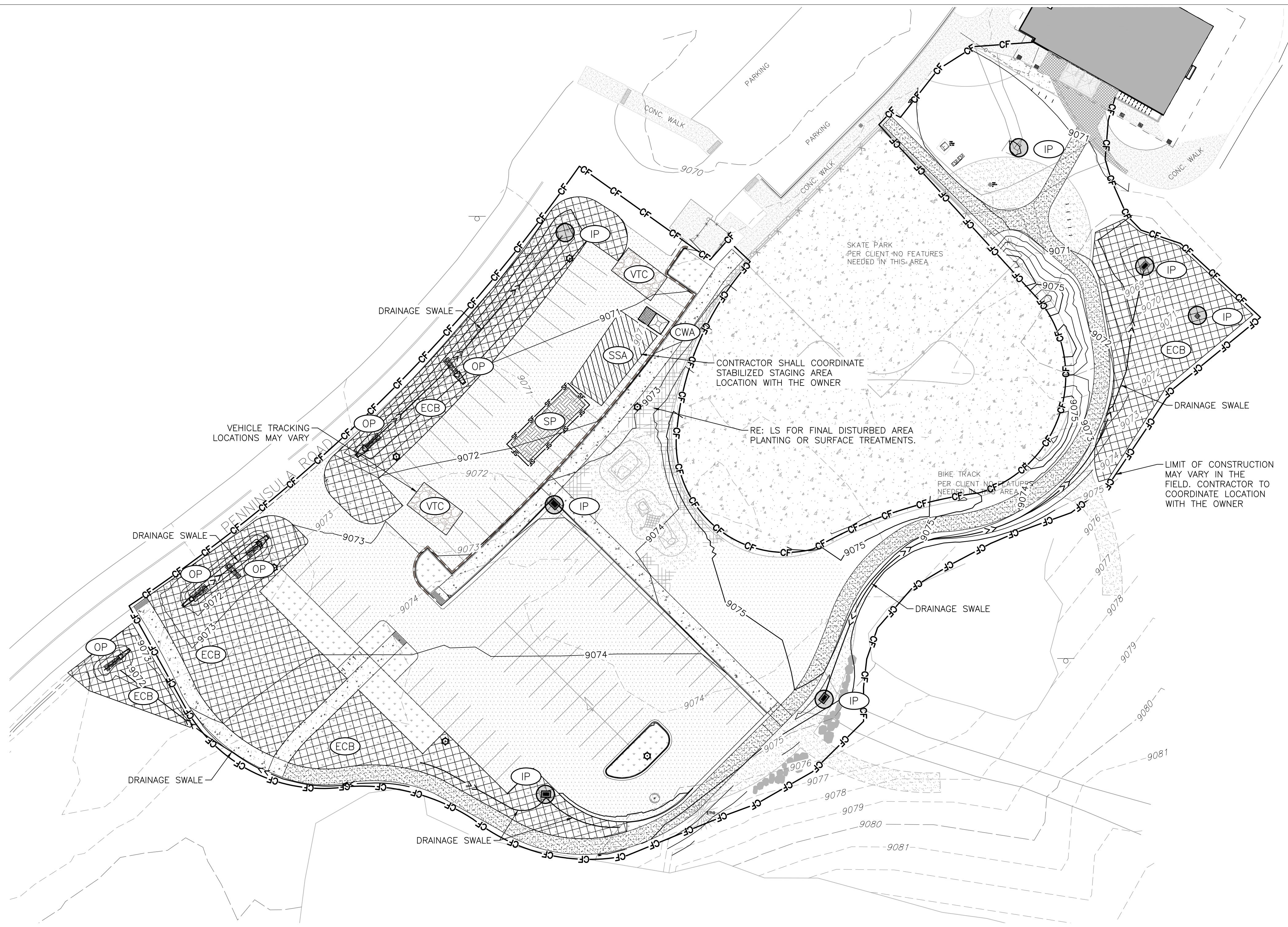
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Job Number	MC18.0378
Project Manager	LML
Design By	REJ
Drawn By	REJ
Principal in Charge	LML

Sheet Number:

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PLOT DATE: Tuesday, April 9, 2019 1:23 PM LAST SAVED BY: DVERRATTI
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 USER: DVERRATTI
 TITLE: EROSION CONTROL PLAN

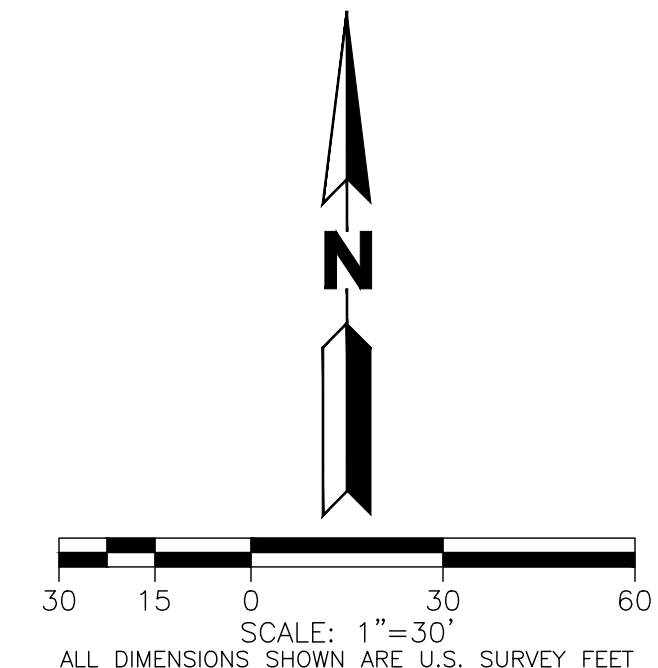


LEGEND		
	SILT FENCE	(SF)
	VEHICLE TRACKING CONTROL	(VTC)
	INLET PROTECTION	(IP)
	STABILIZED STAGING AREA	(SSA)
	STOCKPILE MANAGEMENT W/ PROTECTION	(SP)
	CONCRETE WASHOUT AREA	(CWA)
	CONSTRUCTION FENCE	(CF)
	EROSION CONTROL BLANKET	(ECB)

EROSION CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE WATERSHED BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO STRIPPING OF NATIVE VEGETATIVE COVER AND AS GRADING PROGRESSES. REFER TO SEDIMENT AND EROSION CONTROL PLANS AND STORM WATER MANAGEMENT PLAN. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS. THE PLAN MAY BE MODIFIED WITH APPROPRIATE APPROVALS AS FIELD CONDITIONS WARRANT.
2. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
3. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS.
4. AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
5. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 30 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. UNLESS SPECIFIED OTHERWISE, TEMPORARY VEGETATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR INSTALLATION WITHIN THREE MONTHS. TEMPORARY VEGETATION SHALL BE A VIGOROUS, DROUGHT TOLERANT, NATIVE SPECIES MIX. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION, BUT SEEDED AREAS SHALL BE IRRIGATED, IF CONDITIONS MERIT. REFER TO THE LANDSCAPE PLAN FOR FINAL LANDSCAPING.
6. TEMPORARY FENCES SHALL BE INSTALLED ALONG ALL BOUNDARIES OF THE CONSTRUCTION LIMITS OR PROPERTY LINES AS SHOWN ON THE APPROVED EROSION CONTROL PLAN, TO PREVENT GRADING ON PROPERTY NOT OWNED BY THE OWNER/DEVELOPER. IN ADDITION, THE TOWN OF FRISCO MAY REQUIRE ADDITIONAL TEMPORARY FENCES IF FIELD CONDITIONS WARRANT.
7. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, ROADWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
8. THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN INADVERTENTLY DISCHARGED TO, OR ACCUMULATED IN, THE FLOWLINES AND PUBLIC RIGHT-OF-WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT.

9. THE GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC ROADWAYS.
10. APPROVED EROSION AND SEDIMENT CONTROL "BEST MANAGEMENT PRACTICES" [BMP] SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL BMPs WEEKLY AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
11. WATER USED IN THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES SHALL BE DISCHARGED INTO A PREDEFINED, BERMED CONTAINMENT AREA ON THE JOB SITE. THE REQUIRED CONTAINMENT AREA IS TO BE BERMED SO THAT WASH WATER IS TOTALLY CONTAINED. WASH WATER DISCHARGED INTO THE CONTAINMENT AREA SHALL BE ALLOWED TO INFILTRATE OR EVAPORATE. DRIED CONCRETE WASTE SHALL BE REMOVED FROM THE CONTAINMENT AREA AND PROPERLY DISPOSED OF. SHOULD A PREDEFINED BERMED CONTAINMENT AREA NOT BE AVAILABLE DUE TO THE PROJECT SIZE, OR LACK OF AN AREA WITH A SUITABLE GROUND SURFACE FOR ESTABLISHING A CONTAINMENT AREA, PROPER DISPOSAL OF READY MIX WASHOUT AND RINSE OFF WATER AT THE JOB SITE SHALL CONFORM TO THE APPROVED TECHNIQUES AND PRACTICES IDENTIFIED IN THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT'S TRAINING VIDEO ENTITLED "BUILDING FOR A CLEANER ENVIRONMENT, READY MIX WASHOUT TRAINING", AND ITS ACCOMPANYING MANUAL ENTITLED, "READY MIX WASHOUT GUIDEBOOK, VEHICLE AND EQUIPMENT WASHOUT AT CONSTRUCTION SITES." THE DIRECT OR INDIRECT DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. INFORMATION ABOUT, OR COPIES OF THE VIDEO AND TRAINING MANUAL ARE AVAILABLE FROM THE WATER QUALITY CONTROL DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO 80222-1530, 303-692-3555.
12. THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED.
13. PAVED SURFACES WHICH ARE ADJACENT TO CONSTRUCTION SITES SHALL BE SWEEPED IN A TIMELY MANNER WHEN SEDIMENT AND OTHER MATERIALS ARE TRACKED OR DISCHARGED ON TO THEM. EITHER SWEEPING BY HAND OR USE OF STREET SWEEPERS IS ACCEPTABLE. STREET SWEEPERS USING WATER WHILE SWEEPING IS PREFERRED IN ORDER TO MINIMIZE DUST. FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.



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FRISCO PENINSULA RECREATION AREA

EROSION CONTROL PLAN

No.	Issue / Revision	Date	Name

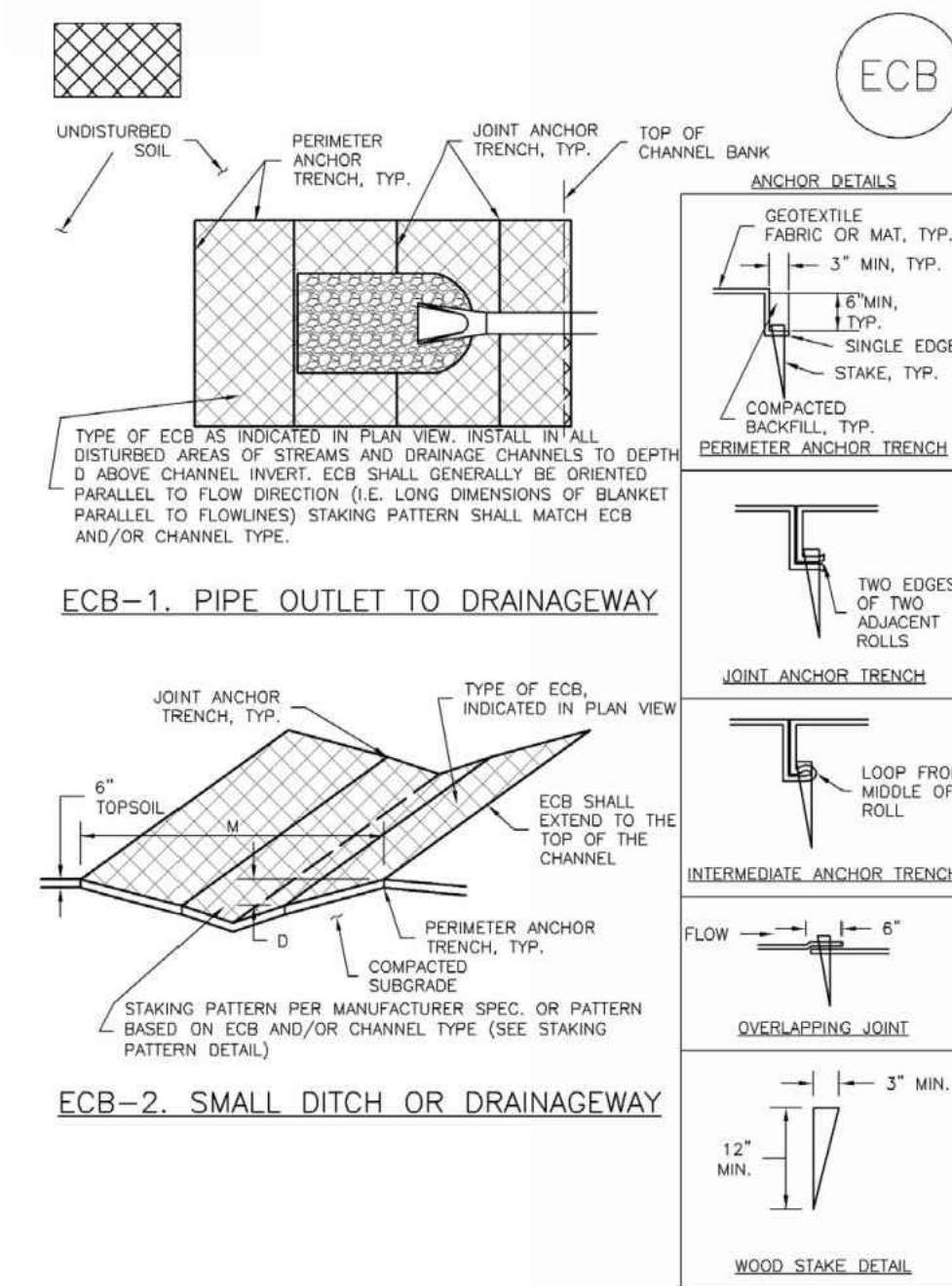
Job Number	MC18.0378
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Design By	REJ
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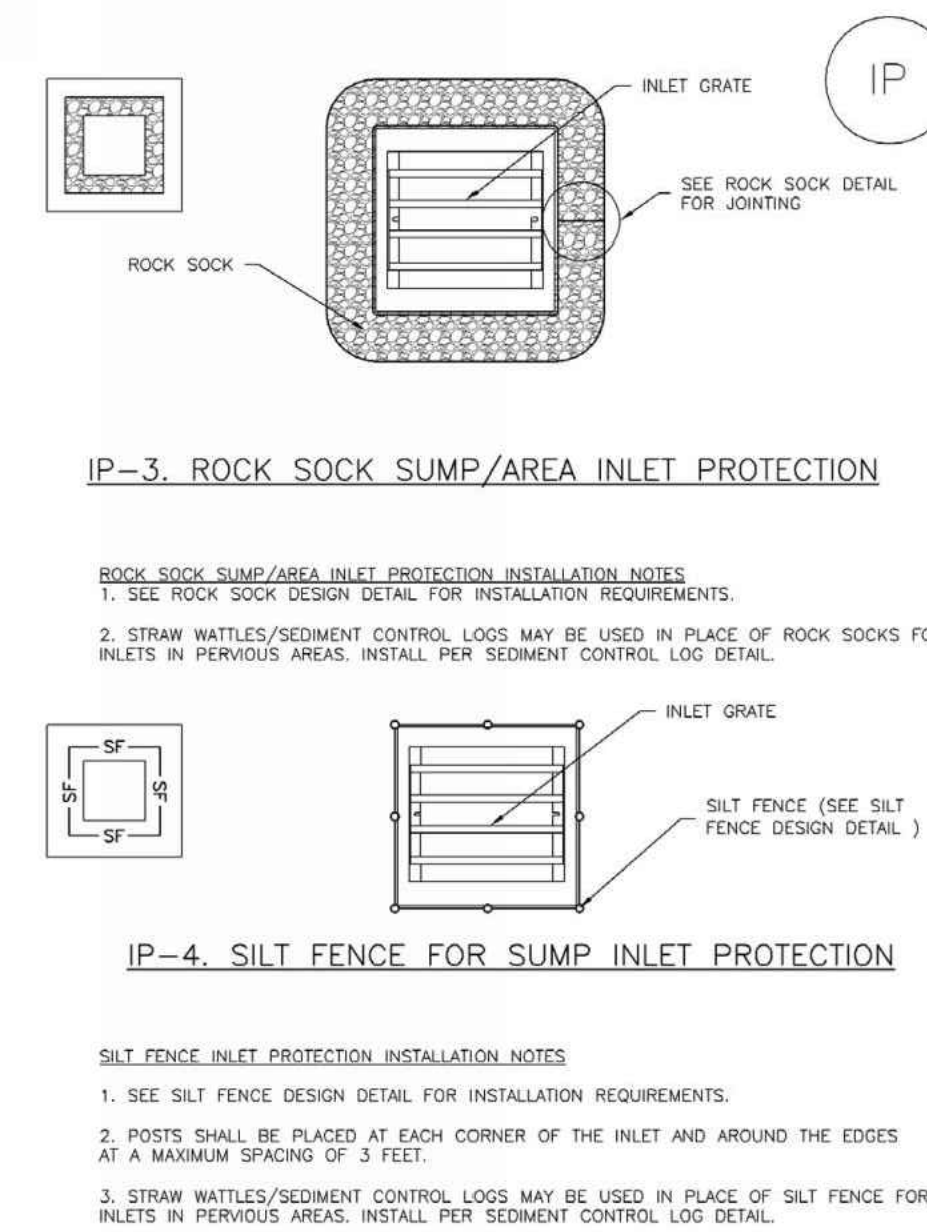
C-500

EC-6 Rolled Erosion Control Products (RECP)



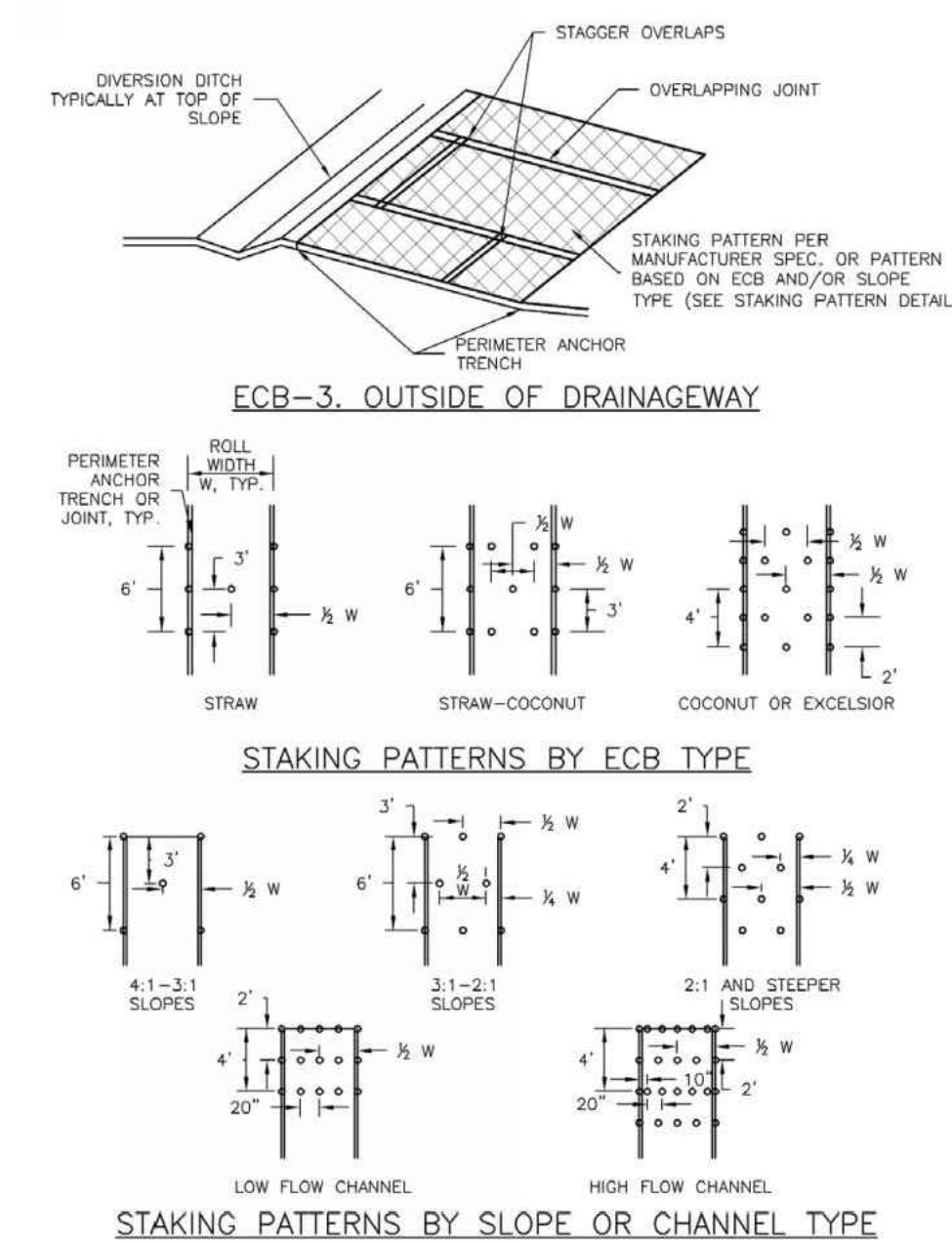
RECP-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Inlet Protection (IP) SC-6



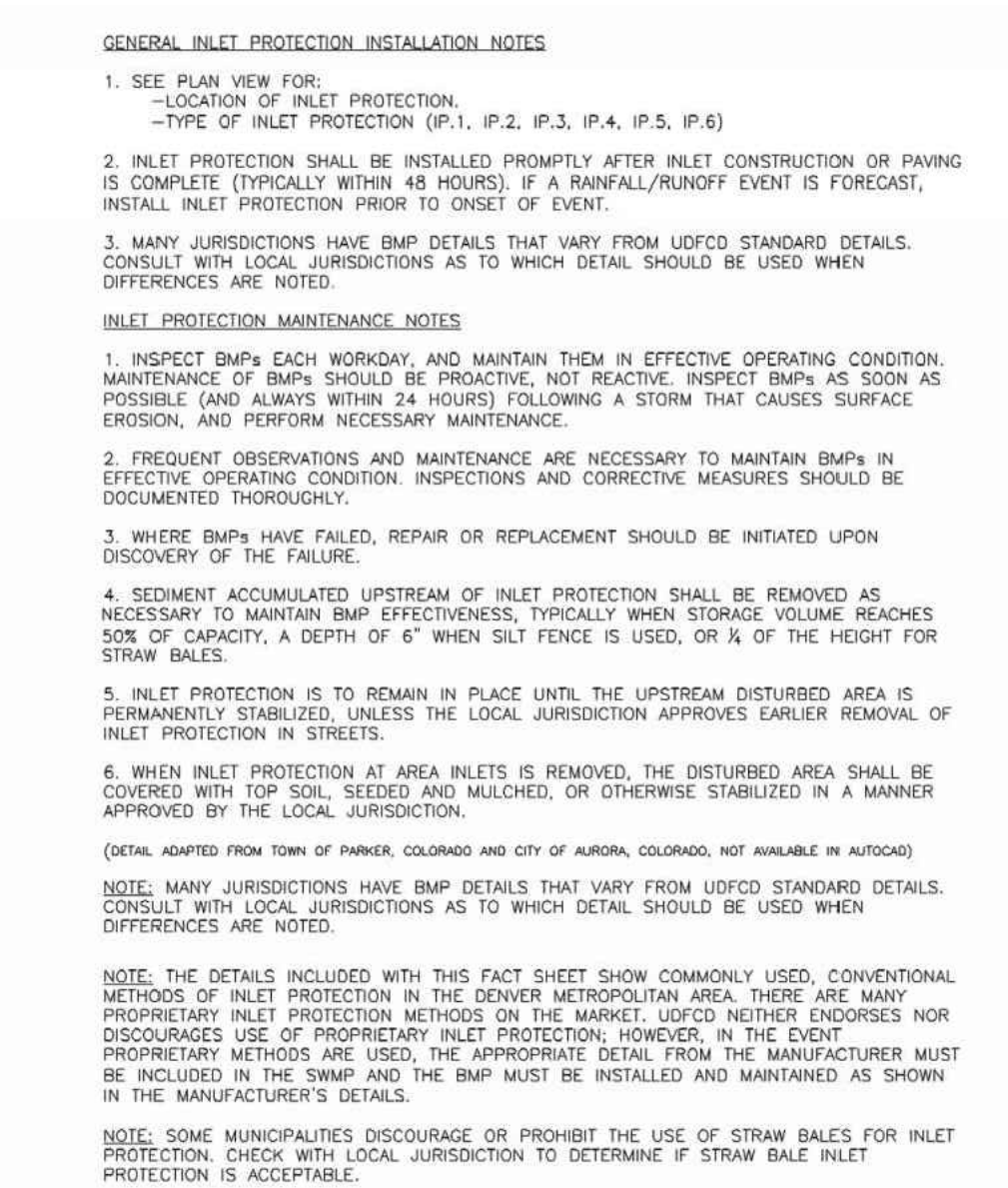
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-5

EC-6 Rolled Erosion Control Products (RECP) EC-6



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RECP-7

Inlet Protection (IP) SC-6



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-7

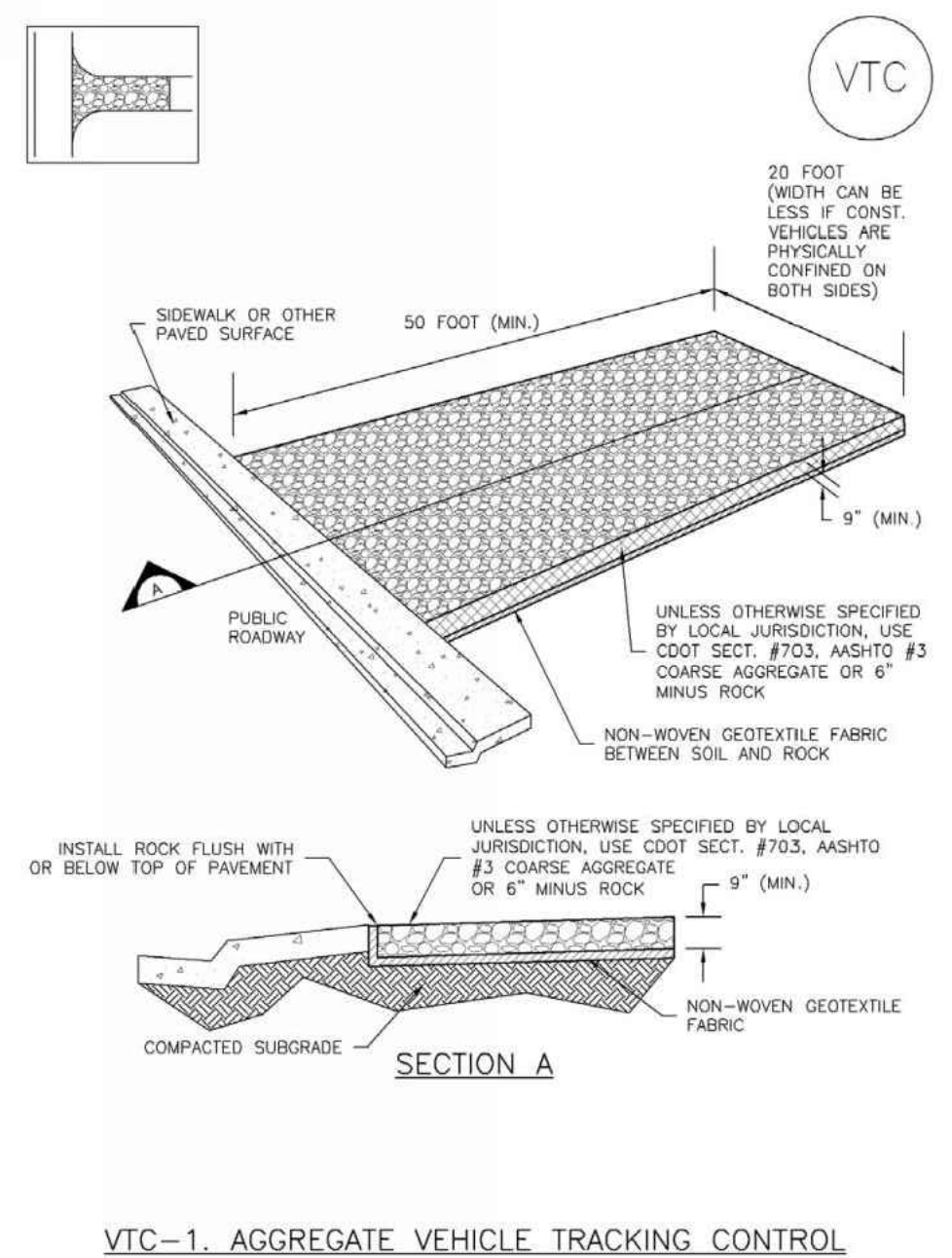
EC-6 Rolled Erosion Control Products (RECP) EC-6

- EROSION CONTROL BLANKET INSTALLATION NOTES
1. SEE PLAN VIEW FOR:
- LOCATION OF ECB
- TYPE OF ECB (STRAW, STRAW-COCOONUT, COCONUT, OR EXCELSIOR)
- AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS
Table with 5 columns: TYPE, COCONUT CONTENT, STRAW CONTENT, EXCELSIOR CONTENT, RECOMMENDED NETTING

RECP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Vehicle Tracking Control (VTC) SM-4



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

EC-6 Rolled Erosion Control Products (RECP) EC-6

- EROSION CONTROL BLANKET MAINTENANCE NOTES
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RECP-9

SM-4 Vehicle Tracking Control (VTC)

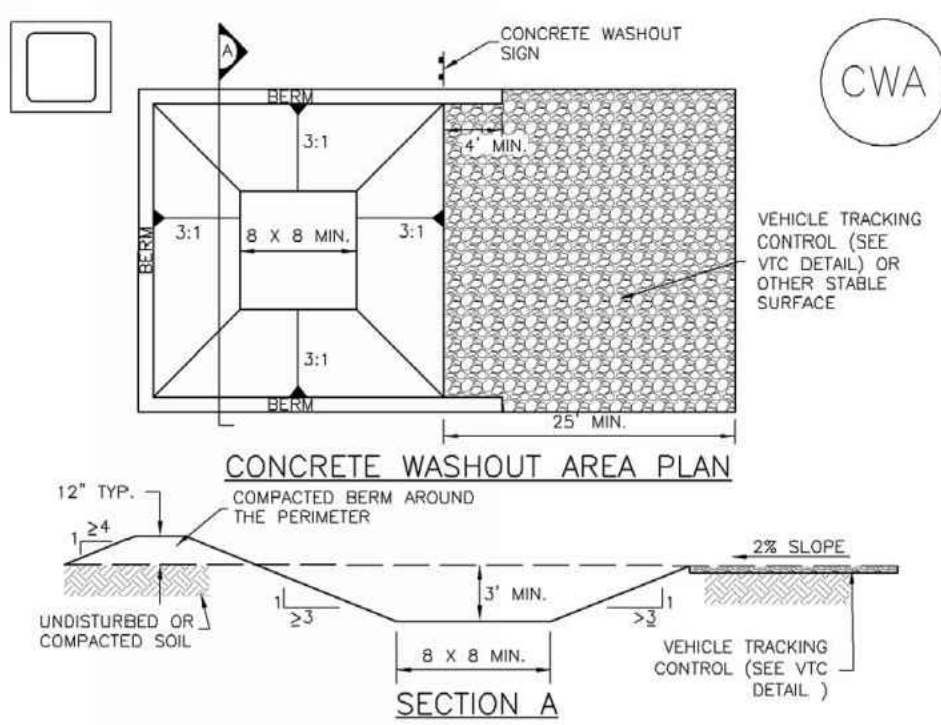
- STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES
1. SEE PLAN VIEW FOR:
- LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S)
- TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S)

VTC-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

PLOT DATE: Tuesday, April 2, 2019 2:58 PM LAST SAVED BY: DVERRATTI
PREPARED DATE: 12/02/09 BY: JAC/MLC

Revision table with columns: No., Issue / Revision, Date, Name

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS UNFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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MM-1 Concrete Washout Area (CWA)

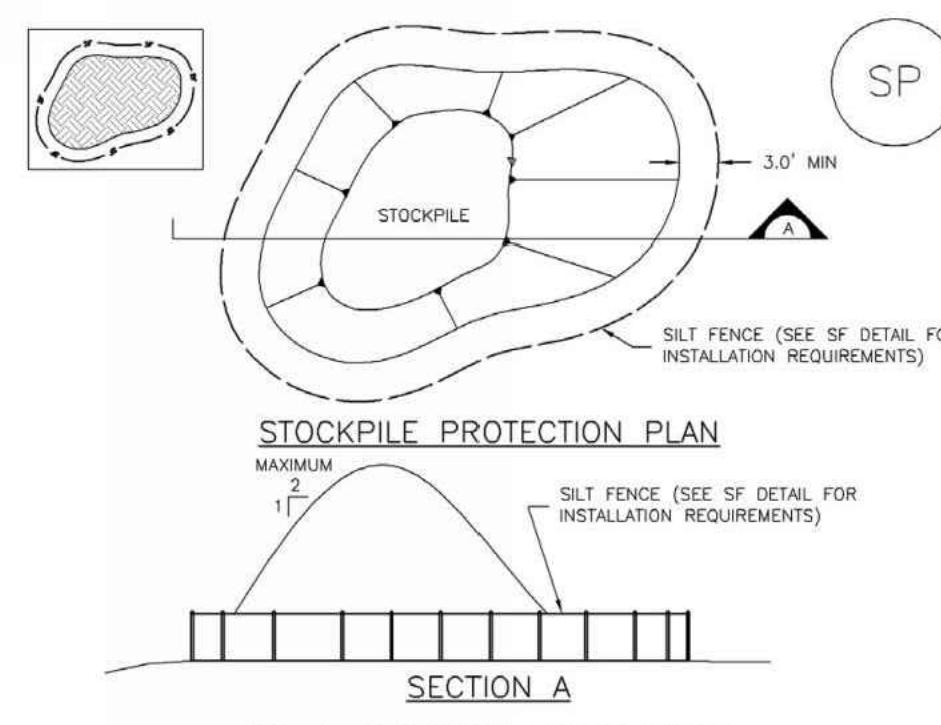
CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFGCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Stockpile Management (SP) MM-2



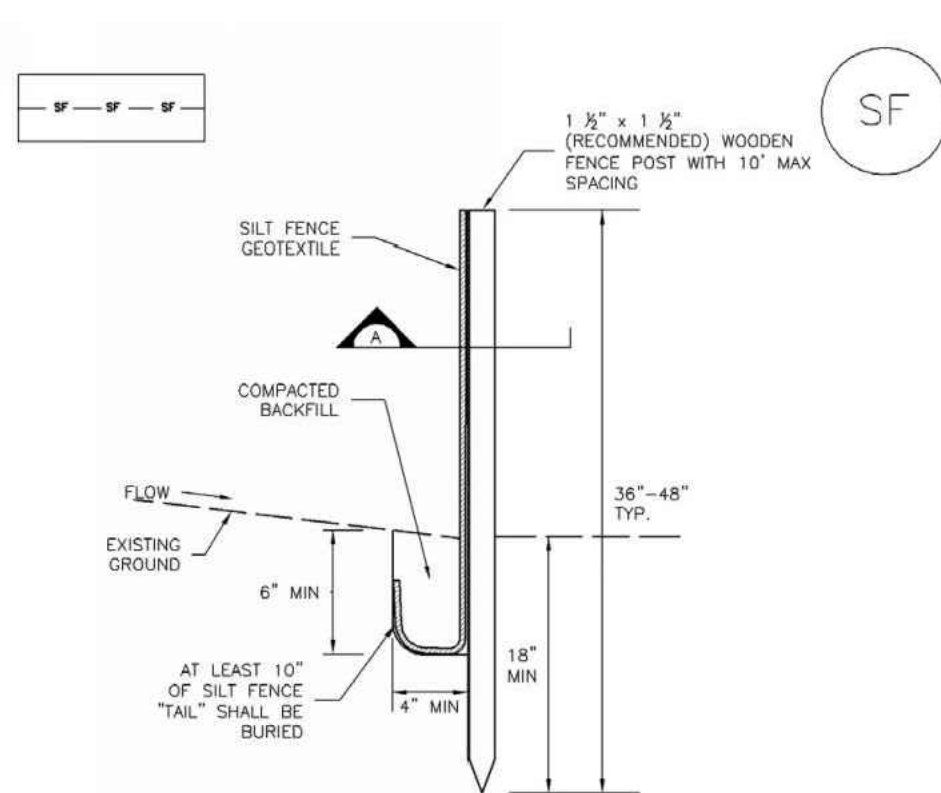
SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

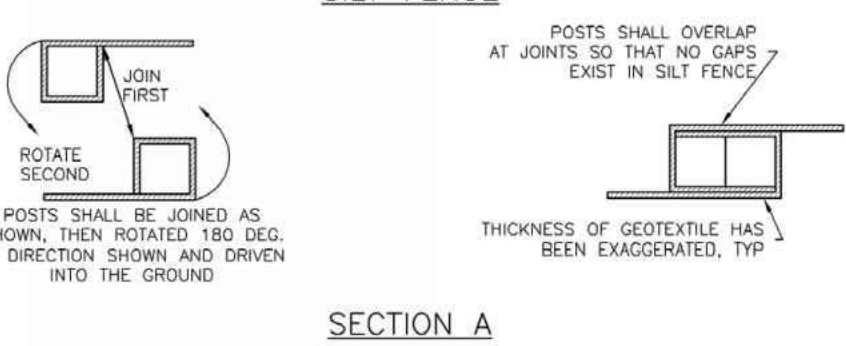
1. SEE PLAN VIEW FOR: -LOCATION OF STOCKPILE. -TYPE OF STOCKPILE PROTECTION.
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER CONSERVATION CONTROLS INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SP-3

Silt Fence (SF) SC-1



SILT FENCE



SECTION A

SF-1. SILT FENCE

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

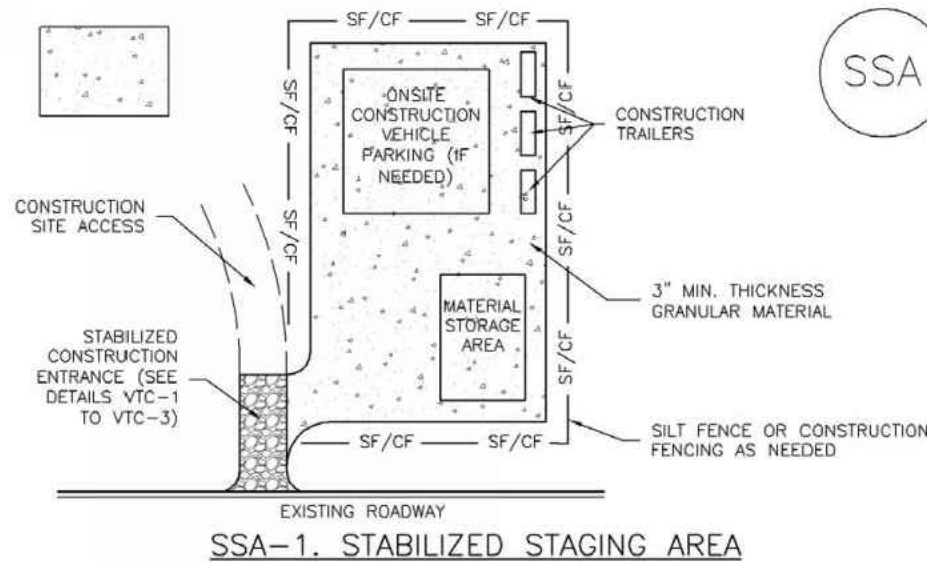
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES, THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SM-6 Stabilized Staging Area (SSA)



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF STAGING AREA(S). -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING AS NEEDED.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REPLACED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFGCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

No.	Issue / Revision	Date	Name

Job Number: MC18.0378

Project Manager: LML
Design By: REJ
Drawn By: REJ
Principal in Charge: LML

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Sheet Number:

C-502

PLANT SCHEDULE

— DECIDUOUS TREES

QTY.	COMMON NAME	BOTANICAL NAME	SIZE & CONDITION
8	ANG QUAKING ASPEN (SINGLE-STEM)	POPULUS TREMULOIDES	3" CALIPER
6	CAN 'CANADA RED' CHOKECHERRY	PRUNUS VIRGINIANA 'CANADA RED'	2" CALIPER
6	SPR 'SPRING SNOW' CRABAPPLE	MALUS 'SPRING SNOW'	2" CALIPER B&B

— EVERGREEN TREES

QTY.	COMMON NAME	BOTANICAL NAME	SIZE & CONDITION
4	BCP BRISTLEcone PINE	PINUS ARISTATA	6' - 10' HEIGHT

— SHRUBS

QTY.	COMMON NAME	BOTANICAL NAME	SIZE & CONDITION
11	YMW YELLOW MOUNTAIN WILLOW	SALIX MONTICOLA	# 5 CONTAINER MINIMUM HT. 2'
15	CAC PEKING COTONEASTER	COTONEASTER ACUTIFOLIA	# 5 CONTAINER MINIMUM HT. 2'

HIGH COUNTRY NATIVE SEED MIXTURE

COMMON NAME	BOTANICAL NAME	% MIX
SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS	15 %
BLUEBUNCH WHEATGRASS	PSEUDOROEGNERIA SPICATA	15 %
SANDBERG BLUEGRASS	POA SECUNDA	10 %
INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES	10 %
IDAHO FESCUE	FESTUCA IDAHOENSIS	10 %
WESTERN WHEATGRASS	PASCOPIRUM SMITHII	10 %
BLUE WILDRYE	ELYMUS GLAUCUS	10 %
ROCKY MOUNTAIN FESCUE	FESTUCA SAXIMONTANA	10 %
TUFTED HAIRGRASS	DESCHAMPSIA CESPITOSA	5 %
CANBY BLUEGRASS	POA SECUNDA 'CANBAR'	5 %
TOTAL:		100%

NOTES

- SEED APPLICATION RATES
 - BROADCAST: 20-25 LBS/ACRE
 - DRILLED: 15-20 LBS/ACRE
- APPLY EROSION CONTROL NETTING TO ANY AREA WHICH IS VULNERABLE TO SOIL EROSION SUCH AS SWALES OR STEEP SLOPES (3:1 OR STEEPER)
- UTILIZE HYDROMULCH AND TACKIFIER OF 2,000 POUNDS PER ACRE WITH 3% TACKIFIER.
- UNLESS NOTED OTHERWISE IN TECHNICAL SPECIFICATIONS, AMEND ALL TOPSOIL IN RESEED AREAS TO 2" DEPTH WITH COMPOST.

PARKING AREA LANDSCAPE REQUIREMENTS	
PROPOSED PAVED AREA	31,129 SF
REQUIRED LANDSCAPE AREA (0.06% OF PROPOSED PAVED AREA)	1,868 SF
PROPOSED LANDSCAPE AREA (AREA WITHIN 10' OF THE PERIMETER OF THE PAVED AREA)	6,401 SF

INTERNAL VS. EXTERNAL LANDSCAPE REQUIREMENTS	
REQUIRED LANDSCAPE AREA	1,868 SF
PROPOSED LANDSCAPE AREA	6,401 SF
REQUIRED INTERNAL LANDSCAPE (50% OF REQUIRED LANDSCAPE AREA)	934 SF
PROPOSED INTERNAL LANDSCAPE	1,001 SF
REQUIRED EXTERNAL LANDSCAPE	934 SF
PROPOSED EXTERNAL LANDSCAPE	5,400 SF

TREE AND SHRUB LANDSCAPE REQUIREMENTS	
REQUIRED TREES	13
PROPOSED TREES	24
REQUIRED SHRUBS	26
PROPOSED SHRUBS	26

VEGETATION REQUIREMENTS	
REQUIRED TREES	13
PROPOSED TREES	24
REQUIRED 3" CALIPER DECIDUOUS TREES (50% OF REQUIRED TREES)	7
PROPOSED 3" CALIPER DECIDUOUS TREES	8
REQUIRED 10' EVERGREEN TREE	1
PROPOSED 10' EVERGREEN TREE	1
REQUIRED 8' EVERGREEN TREE	1
PROPOSED 8' EVERGREEN TREE	1
REQUIRED 6' EVERGREEN TREE	2
PROPOSED 6' EVERGREEN TREE	2

PLANT SPECIES DIVERSITY	
TREES REQUIRED ON SITE	13
MAXIMUM PERCENT OF ANY ONE SPECIES (45%)	6

SNOW STORAGE REQUIREMENTS	
PROPOSED PAVED AREA	31,129 SF
REQUIRED SNOW STORAGE (25%)	7,782 SF
PROPOSED SNOW STORAGE	7,786 SF

AMENITY SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	CONTACT	MODEL NUMBER	COLOR / FINISH	NOTES
◆	BIKE RACK 291 SERIES	DUMOR	CONTACT: 303.783.1452 Isabel Keegan Rocky Mountain Recreation isabel@rmrec.com	291	POWDERCOAT TEXTURED BLACK	QUANTITY: 4 DIMENSIONS: 36"H x 24"W x 6"L SURFACE MOUNT
◆	PLB SOLAR LED BOLLARD LIGHT	FIRSTLIGHT TECHNOLOGIES	CONTACT: 303.623.1233 Brandon Harris CED Sales BHarris@ceddenver.com	PLB-102	POWDERCOAT BLACK	QUANTITY: 5 DIMENSIONS: 36" H; 10" TOP DIA.; 6" POST DIA. ALUMINUM MOUNTING PLATE ON CONCRETE FOOTER

NOTES: ALL SITE FURNISHINGS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. 4 - 6 WEEK APPROXIMATE LEAD TIME.

MATERIAL SCHEDULE (CONTRACTOR TO SUBMIT SAMPLES FOR ALL ITEMS IN MATERIAL SCHEDULE FOR OWNER / ARCHITECT REVIEW AND APPROVAL.)

ITEM	DESCRIPTION	MANUFACTURER	PRODUCT NAME	SIZE / DIMENSIONS	COLOR / FINISH	NOTES
◆	CONCRETE SIDEWALK	N/A	N/A	REFER TO CIVIL PLANS	STANDARD GRAY LIGHT BROOM FINISH	REFER TO CIVIL FOR DEPTH AND INSTALLATION DETAILS
◆	CRUSHER FINES	PIONEER SAND OR APPROVED EQUAL	WALKWAY/DRIVEWAY GRAVEL	CRUSHER FINE 1/4" MINUS	GREY BREEZE	REFER TO DETAIL #1 / L 3-02. SHALL BE CLEANED AND FREE OF DEBRIS AND ORGANIC MATTER
◆	LANDSCAPE MULCH	PIONEER SAND OR APPROVED EQUAL	NORTHWOODS ORGANICS WNW03255	SHREDDED BARK LANDSCAPE MULCH	NATURAL	REFER TO LANDSCAPE DETAILS AND TECHNICAL SPECIFICATIONS FOR INSTALLATION; 3" DEPTH

NOTES: REFERENCE ARCHITECTURAL / STRUCTURAL / CIVIL FOR ALL SUBGRADE INFORMATION. LANDSCAPE ARCHITECTURE SET TO SPECIFY: COLOR, FINISH, AND MANUFACTURER ONLY.



FRISCO PENINSULA
PARKING LOT EXPANSION
 FRISCO, CO
 CONSTRUCTION DOCUMENTS

OWNER:
 TOWN OF FRISCO
 1 MAIN STREET
 FRISCO, CO
 970.668.5276
 970.668.0677



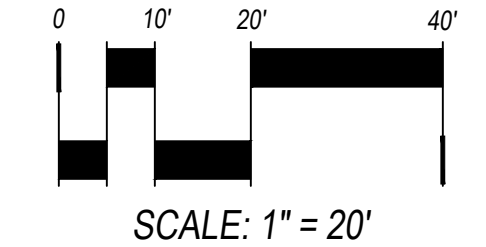
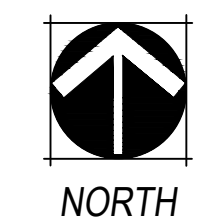
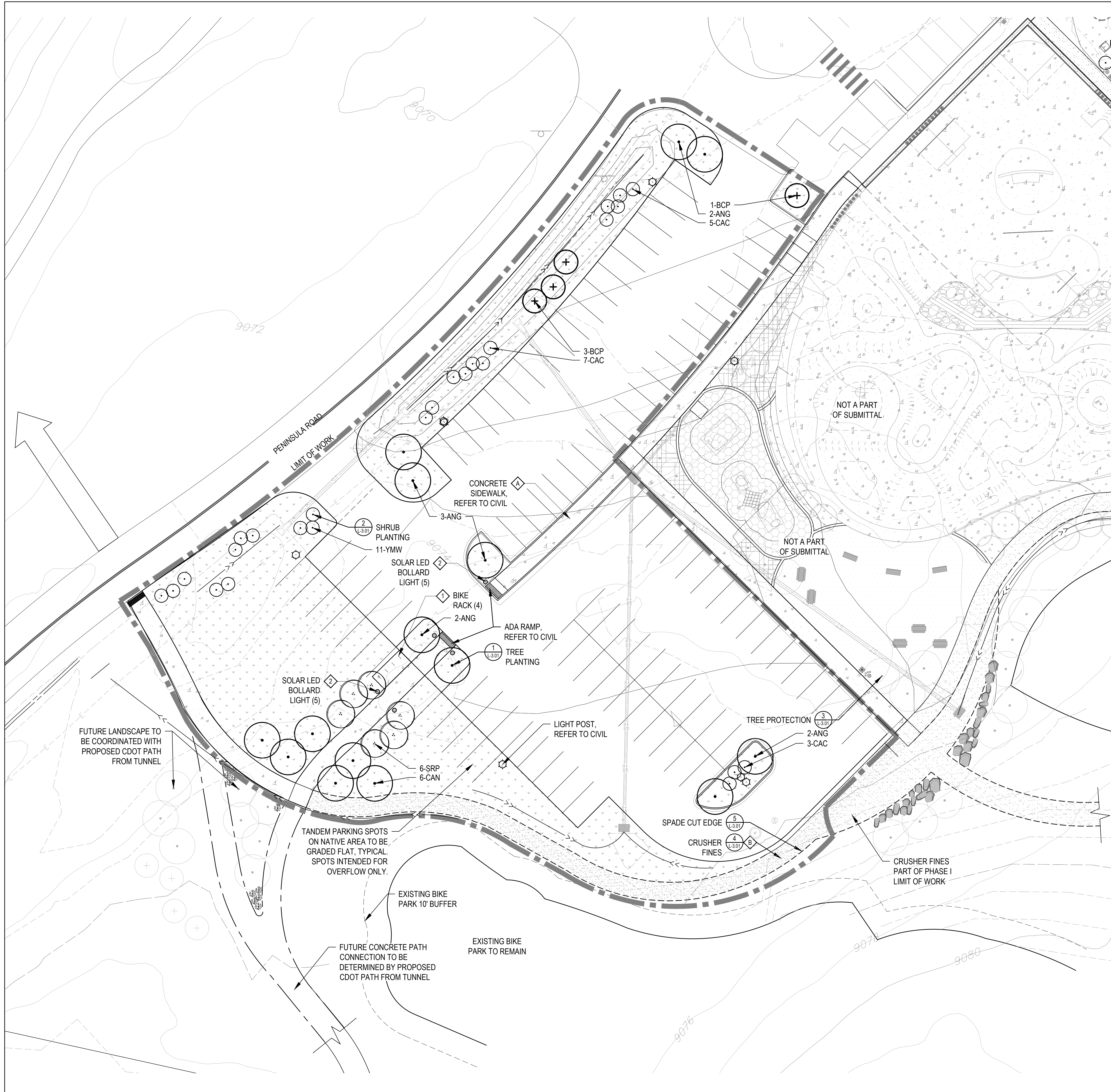
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 LANDSCAPE PLAN

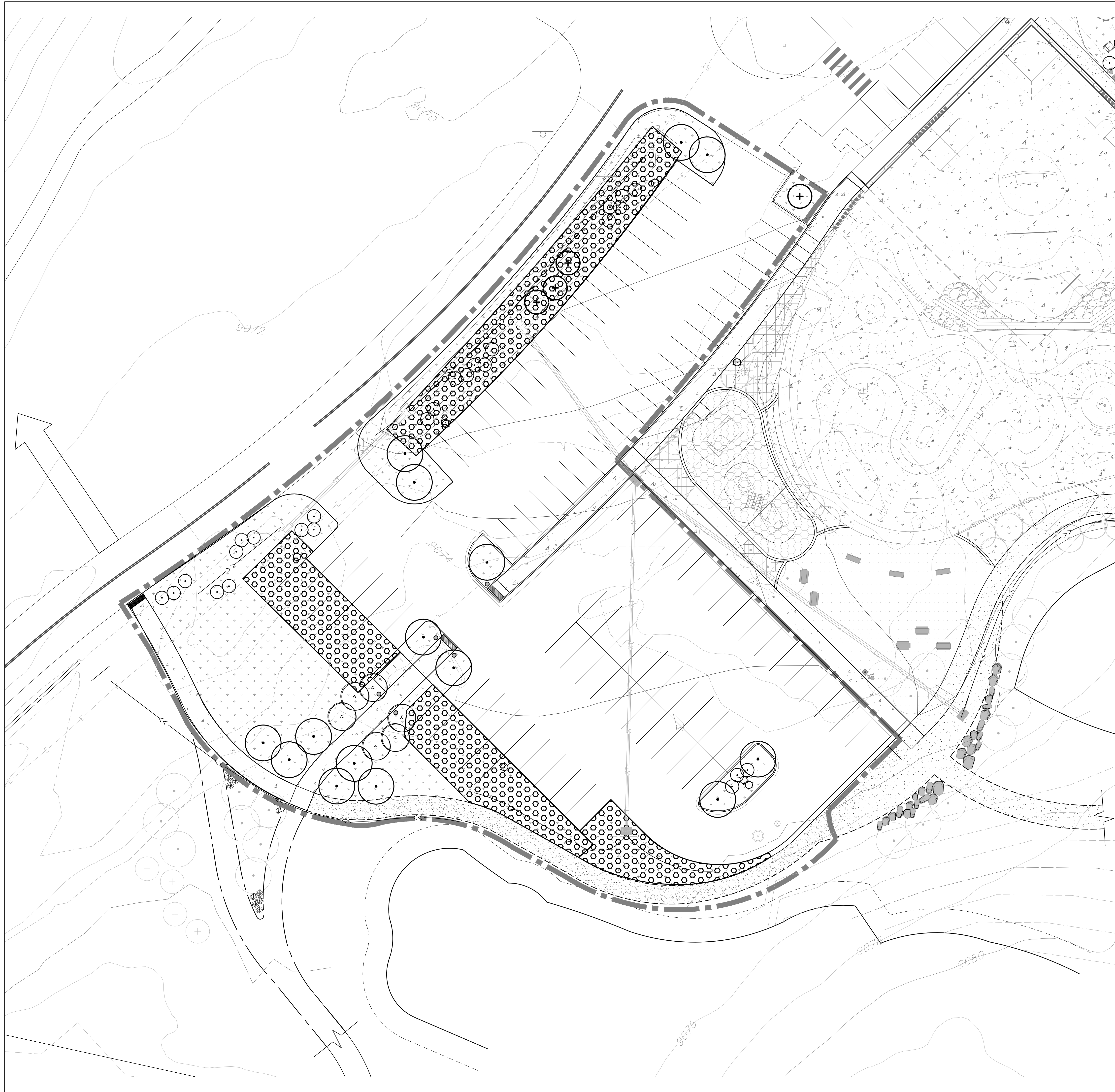
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LEGEND

- SPADE CUT EDGER
- LIMIT OF WORK
- CONCRETE (REF: CIVIL)
- SEED
- CRUSHER FINES
- BIKE RACKS
- DECIDUOUS TREES
- EVERGREEN TREES
- DECIDUOUS SHRUBS



CHECKED BY: MT, BR
 DRAWN BY: AR, LM, EN



SNOW STORAGE REQUIREMENTS	
PROPOSED PAVED AREA	31,129 SF
REQUIRED SNOW STORAGE (25%)	7,782 SF
PROPOSED SNOW STORAGE	7,786 SF

FRISCO PENINSULA
PARKING LOT EXPANSION
 FRISCO, CO
 CONSTRUCTION DOCUMENTS

OWNER:
 TOWN OF FRISCO
 1 MAIN STREET
 FRISCO, CO
 970.668.5276
 970.668.0677

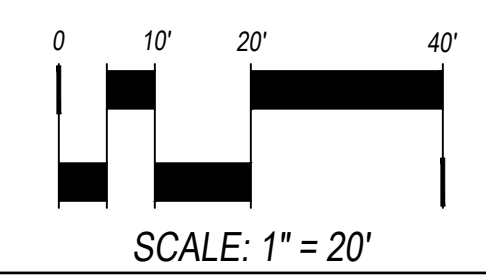


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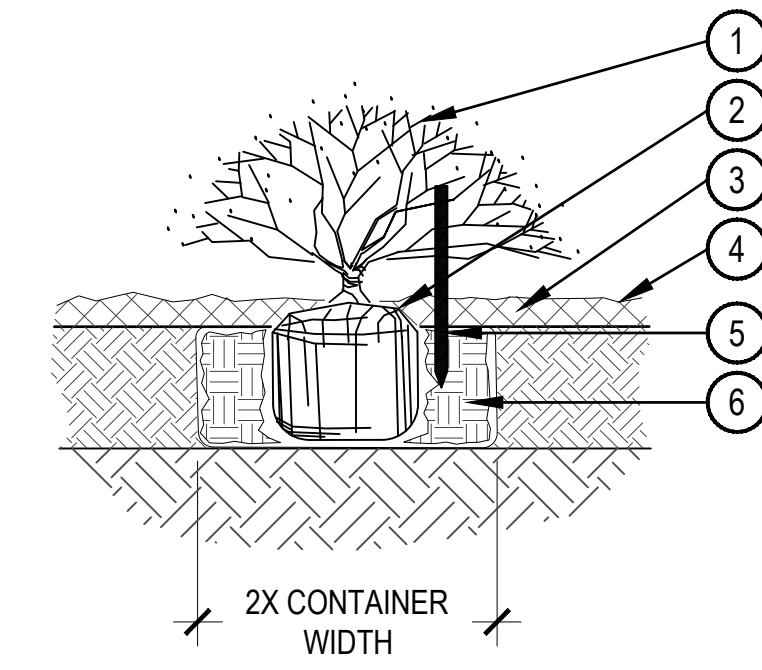
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 SNOW STORAGE
 PLAN

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 DRAWN BY: AR, LM, EN



- 1 PRUNE ALL DEAD OR DAMAGED WOOD PRIOR TO PLANTING
- 2 SET SHRUB ROOT-BALL 1" HIGHER THAN FINISH BED GRADE
- 3 SPECIFIED MULCH. REFER TO MATERIAL SCHEDULE: C
- 4 2"-6" WOODEN STAKE DRIVEN INTO GROUND NEXT TO ROOTBALL. 18" OF THE STAKE MUST BE VISIBLE
- 5 AMENDED TOPSOIL. REFER TO SPECIFICATIONS. TILL SOIL TO MATCH SHRUB CONTAINER DEPTH
- 6 FINISH GRADE

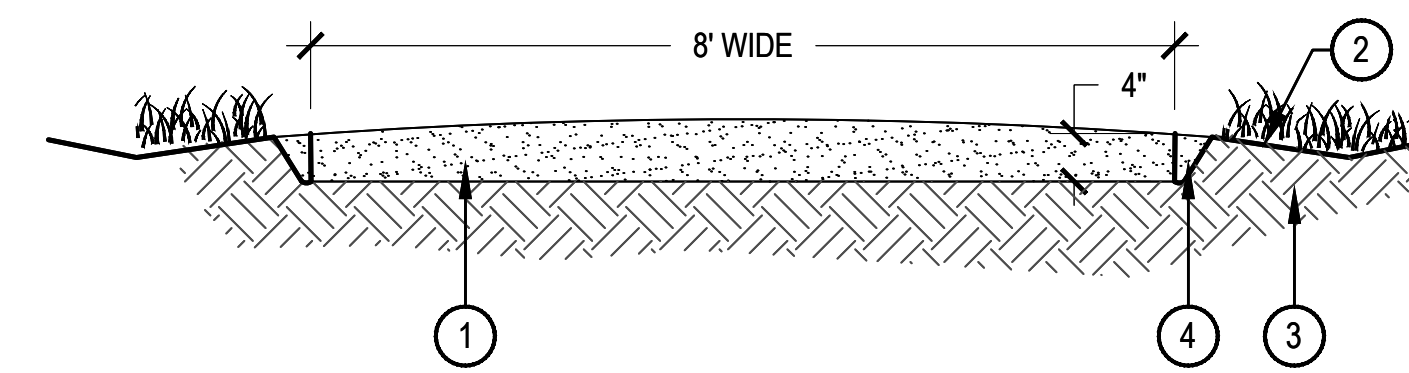


- NOTES:
1. BROKEN OR CRUMBLING ROOT-BALLS WILL BE REJECTED
 2. CARE SHOULD BE TAKEN NOT TO DAMAGE THE SHRUB OR ROOT-BALL WHEN REMOVING IT FROM ITS CONTAINER
 3. ALL JUNIPERS SHOULD BE PLANTED SO THE TOP OF THE ROOT-BALL OCCURS ABOVE THE FINISH GRADE OF THE MULCH LAYER
 4. FILL PLANT PIT WITH 1/2 SPECIFIED SOIL MIX AND 1/2 PIT SOIL
 5. DIG PLANT PIT TWICE AS WIDE AND HIGH AS THE CONTAINER

2 SHRUB PLANTING IN NATIVE AREAS

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

- 1 COMPACTED CRUSHER FINES
- 2 SLOPE ADJACENT GRADE AWAY FROM TRAIL, SWALE IF NECESSARY
- 3 COMPACTED SUBGRADE, 95% PROCTOR DENSITY
- 4 SPADE CUT EDGER, REFER TO DETAIL 5, SHEET L 3-01



- COMPACTION NOTES:
1. COMPACT WET FOR BEST RESULTS.
 2. USE A SMALL (4") RIDING ROLLER TO COMPACT TRAIL.
 3. CROWN TRAIL IN FLAT AREAS (AS SHOWN).
 4. CROSS-SLOPE TRAIL AT 1-2% WITH GRADE WHERE TOPOGRAPHY DICTATES.
 5. REFER TO CIVIL SET FOR GRADING.

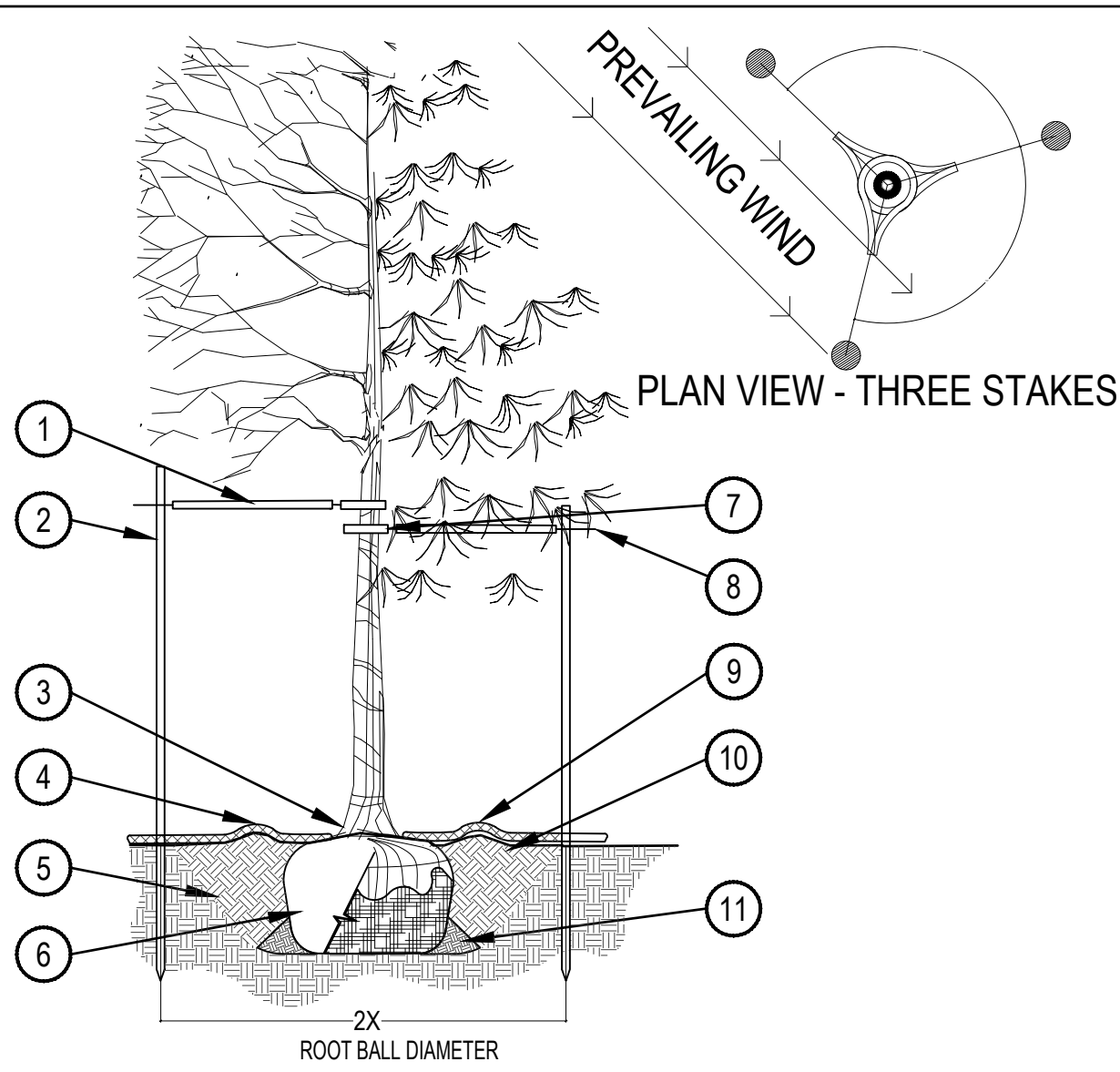
- REVEGETATION NOTES:
1. RE-SEED DISTURBED EDGES OF TRAIL UPON COMPLETION OF TRAIL CONSTRUCTION.
 2. FOLLOW SEEDING SPECIFICATIONS AS PROVIDED BY LANDSCAPE ARCHITECT.

4 CRUSHER FINES

SCALE: 3/4" = 1'-0"

- 1 PLACE MIN. 1/2" PVC PIPE AROUND EACH WIRE. EXPOSED WIRE SHALL BE MAX. 2" EACH SIDE
- 2 INSTALL STAKING PER SPECIFICATIONS
- 3 PLANT TREE SO THAT FIRST ORDER MAJOR ROOT IS 1"-2" ABOVE FINAL GRADE
- 4 3" DEEP MULCH RING PLACED A MINIMUM OF 4 FT. IN DIAMETER ON TOP OF WEED FABRIC. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK (FINISHED GRADE REFERENCES TOP OF MULCH)
- 5 1:1 SLOPE ON SIDES OF PLANTING HOLE
- 6 REMOVE ALL TWINE, ROPE, BURLAP AND WIRE FROM ALL OF ROOTBALL
- 7 GROMMETED NYLON STRAPS
- 8 4-6" HIGH WATER SAUCER IN NON-TURF AREAS
- 9 BACKFILL WITH PLANT MIX. PLANT MIX SHALL CONSIST OF EQUAL PARTS TOPSOIL, COMPOST, AND EXCAVATED SOIL. WATER THOROUGHLY WHEN BACKFILLING
- 10 PLACE SOIL AROUND ROOT BALL FIRMLY. DO NOT COMPACT OR TAMP. SETTLE SOIL WITH WATER TO FILL ALL AIR POCKETS
- 11 PLACE ROOT BALL ON UNDISTURBED SOIL TO PREVENT SETTLEMENT

- PRUNING NOTES:
1. ALL PRUNING SHALL COMPLY WITH ANSI A300 STANDARDS.
 2. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKING NOTES:
1. STAKE TREES PER DIAGRAM. AFTER A MINIMUM OF 3 THREE YEARS CONFIRM TREE IS ESTABLISHED. CHECK FOR ROOTBALL STABILITY. APPLY HAND PRESSURE TO TRUCK OF TREE. WHEN ROOTBALL DOES NOT MOVE, REMOVE STAKING.
 2. WIRE OR CABLE SHALL BE MIN. 12 GAUGE, TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. NYLON STRAPS SHALL BE LONG ENOUGH TO ACCOMMODATE 1-1/2" OF GROWTH AND BUFFER ALL BRANCHES FROM WIRE.
 3. ADJUST STAKING, STRAPS AND GUY WIRES ANNUALLY.
 4. INSTALL SAFETY CAPS ON ALL STAKES.

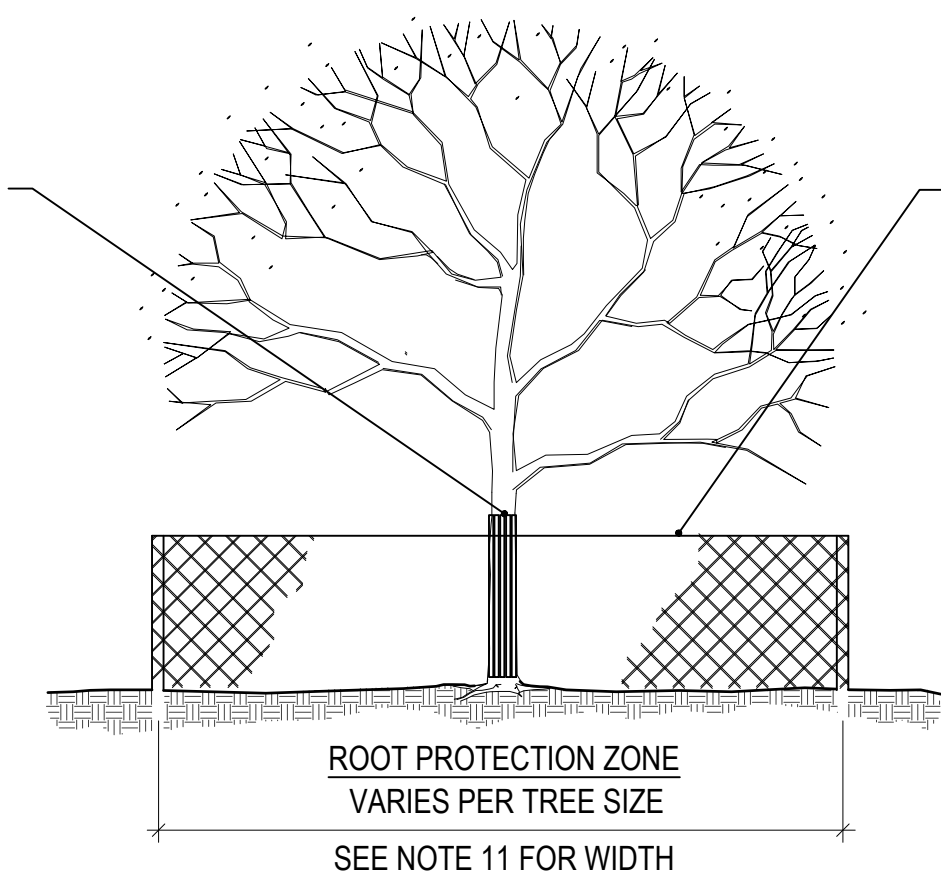


1 TREE PLANTING DETAIL

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

- NOTES:
1. ALL TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE PER DETAIL. GROUPING OF MORE THAN ONE TREE MAY OCCUR.
 2. TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE IDENTIFIED ON THE TRUNK WITH SURVEY TAPE.
 3. 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.
 4. TREE AND SHRUB ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE.
 5. 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.
 6. 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.
 7. WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR.
 8. AUGER TUNNELING RATHER THAN TRENCHING SHOULD BE USED FOR UTILITY PLACEMENT WITHIN DRIP LINE.
 9. FENCING MATERIAL SHALL ENCIRCLE ANY TREE OR SHRUB WHOSE OUTER DRIP LINE EDGE IS WITHIN 20 FEET OF ANY CONSTRUCTION ACTIVITIES.
 10. FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, AND A MINIMUM OF FOUR FEET IN HEIGHT.
 11. 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.
 12. 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.

TRUNK PROTECTION REQUIRED IF WHEELED CONSTRUCTION EQUIPMENT INVOLVED WITHIN 20' OR LESS. 1" BOARDS NOT LESS THAN 5' LONG OR TO REACH FIRST SCAFFOLD BRANCH. WIRE TO HOLD BOARDS IN PLACE, NO NAILS PERMITTED. INCLUDE WRAPPING OF BURLAP UNDER BOARDS.



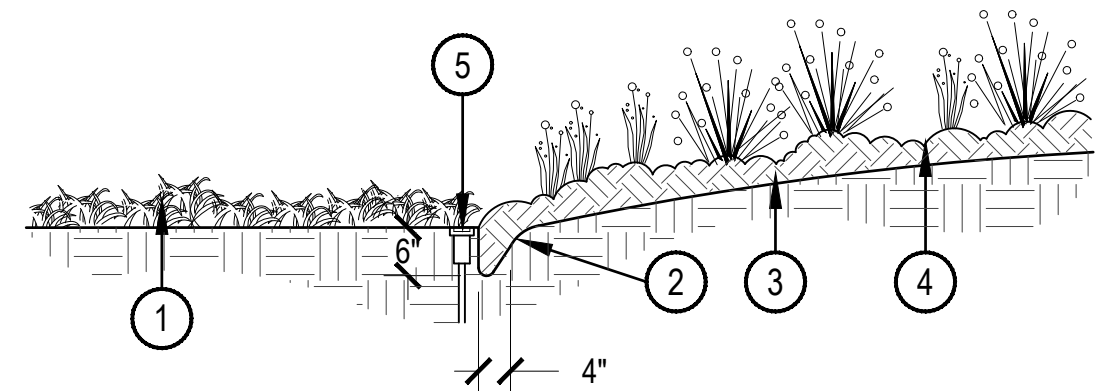
BRANCH PROTECTION PROTECT LOWER BRANCHES OF TREE CANOPY. PROVIDE CONSTRUCTION FENCING OR EQUIVAL AT DRIFLINE (MIN.)

PLACE SIGNS:
 KEEP OUT TREE PROTECTION AREA EVERY 50' ATTACHED TO FENCING

3 TREE AND SHRUB PROTECTION

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

- 1 TYPICALLY IRRIGATED NATIVE SEED
- 2 VERTICAL SPADE CUT EDGE FILLED WITH SPECIFIED MULCH, TAPER EDGE OF BED SO MULCH IS DEEPER AGAINST SPADED EDGE
- 3 SPECIFIED DEPTH OF MULCH (TYPICALLY WOOD MULCH 3"-4" DEEP)
- 4 PLANTING BED OR CLEAN COBBLE
- 5 IRRIGATION HEADS SHOULD BE LOCATED ADJACENT TO MULCH BEDS. OFFSET HEAD INTO GRASS AREA TO ENSURE STABLE SUPPORT



- NOTES:
1. IF IRRIGATION HEAD IS LOCATED ADJACENT TO MULCH BEDS, OFFSET HEAD INTO GRASS AREA TO ENSURE STABLE SUPPORT.

5 SPADE CUT EDGE

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



IRRIGATION GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL THE IMPROVEMENTS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL COORDINATE AS NECESSARY WITH THE GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE FOR SUCCESSFUL COMPLETION OF THIS WORK.
3. THE CONTRACTOR ASSUMES ALL LIABILITY ASSOCIATED WITH THE MODIFICATION OF THE IRRIGATION SYSTEM DESIGN WITHOUT NOTIFYING THE OWNER'S REPRESENTATIVE.
4. ALL IRRIGATION EQUIPMENT IS TO BE AS SPECIFIED OR APPROVED EQUAL PER THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT A THOROUGH SITE INSPECTION AND REVIEW OF THE PROJECT CONSTRUCTION DOCUMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING: LANDSCAPE PLAN, UTILITY PLAN, CIVIL PLAN, GRADING AND DRAINAGE PLAN AND ALL OTHER ASSOCIATED PLANS THAT AFFECT THIS WORK PRIOR TO BEGINNING CONSTRUCTION. IF THE CONTRACTOR OBSERVES ANY DISCREPANCIES AMONG THE CONSTRUCTION DOCUMENTS AND THE EXISTING CONDITIONS ON SITE, IT IS THEIR RESPONSIBILITY TO CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY.
6. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL AND STATE REGULATIONS AND INSTALL THE IRRIGATION SYSTEM AND ITS COMPONENTS PER THE MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN AND PROVIDE PAYMENT FOR ALL PERMITS REQUIRED BY ANY LOCAL AND STATE AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION OVER THIS SITE.
7. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PAYING FOR TESTING OF THE BACKFLOW PREVENTER BY A STATE CERTIFIED INSPECTOR. CONTRACTOR SHALL PROVIDE CERTIFICATES TO OWNER'S REPRESENTATIVE.
8. THE CONTRACTOR MUST VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. IF THE CONTRACTOR FAILS TO DO SO AND DAMAGES ANY UNDERGROUND UTILITIES THROUGH THE COURSE OF HIS WORK THE IRRIGATION CONTRACTOR SHALL PAY FOR ANY REPAIR WORK ASSOCIATED WITH SAID DAMAGES.
9. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN LANDSCAPE AREAS AND WITHIN THE PROJECT LIMITS. EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN FOR GRAPHIC CLARITY ONLY. IF THERE IS A QUESTION REGARDING THE LOCATION OF ANY COMPONENT OF THE IRRIGATION SYSTEM, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER'S REPRESENTATIVE. IF THE CONTRACTOR NEGLECTS TO NOTIFY THE NECESSARY PARTIES, THE CONTRACTOR SHALL PAY FOR ANY REPLACEMENT OR MODIFICATION TO INSURE PROPER LOCATION AND OPERATION OF THE IRRIGATION SYSTEM AND ITS COMPONENTS.
10. ALL IRRIGATION DISTRIBUTION LINES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO, MAINLINE, LATERALS, SPRAY HEADS, ROTORS, ROTARY SPRAYS, DRIP EMITTERS SHALL BE KEPT A MINIMUM DISTANCE OF 6' AWAY FROM ALL BUILDING AND WALL FOUNDATIONS, OR AS STIPULATED IN THE GEOTECHNICAL REPORT, WHICHEVER IS GREATER.
11. ALL VALVE BOXES AND LIDS SHALL BE PLASTIC WITH BOLT LOCKING COVERS. CONTRACTOR SHALL PROVIDE AND INSTALL BOLT LOCKING KIT. LID COLOR TO BE GREEN. INSTALL PER THE CONSTRUCTION DETAILS. DO NOT INSTALL IN PAVED AREAS.
12. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 1'-0" FROM THE EDGE OF PAVED SURFACES AND 3'-0" FROM THE CENTERLINE OF DRAINAGE SWALES OR RETENTION BASINS. THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES TO BE FLUSH FINISH GRADE. CONTRACTOR TO BRAND VALVE ID NUMBER ON ALL LIDS.
13. GROUNDING FOR THE IRRIGATION CONTROLLER IS TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND PER THE AMERICAN SOCIETY OF IRRIGATION CONSULTANTS GUIDELINE 100-2002 FOR EARTH GROUNDING ELECTRONIC EQUIPMENT IN IRRIGATION SYSTEMS FOUND AT www.asic.org/Design_Guides.aspx. FOR TECHNICAL SUPPORT REGARDING THE IRRIGATION CONTROLLER OR GROUNDING PLEASE CONTACT IRRITROL TECHNICAL SERVICES AT (800) 634-8873.
13. THE TWO WIRE DECODER CONTROLLER REQUIRES EACH STATION/CONTROL VALVE AND SENSOR TO HAVE AN FD DECODER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE PROPER NUMBER OF DECODERS PER VALVE MANIFOLD. **SURGE SUPPRESSION AND GROUNDING SHALL BE EVERY 500' OR PER EVER 8 DECODERS.** THE RAIN/FREEZE SENSOR REQUIRES THE SD-210TURF DECODER

QTY. OF STATIONS (VALVES) PER MANIFOLD	REQUIRED FD DECODER
1 STATION	FD-101TURF
1 OR 2 STATIONS SIMULTANEOUSLY	FD-201TURF
1 TO 4 STATIONS SIMULTANEOUSLY	FD-202TURF
1 TO 4 STATIONS W/INDIVIDUAL CONTROL	FD-401TURF
SENSORS	SD-210TURF
SURGE SUPPRESSION	LSP1TURF
14. CONTRACTOR SHALL PULL AND STORE 30" MIN. OF WIRE INTO EACH VALVE BOX. CONTRACTOR SHALL EXTEND SPARE DECODER WIRES AT THE END OF ALL MAINLINE BRANCHES OR TWO-WIRE PATH BRANCHES SERVING THAT CONTROLLER. COIL 30" LENGTH MIN. OF SPARE WIRES IN A 10" ROUND VALVE BOX.
15. CONTROLLER WIRE SHALL BE 14GA MIN. UL APPROVED WIRE, COLOR CODED PER VALVE, TAPED AND BUNDLED EVERY 10'. CONTRACTOR SHALL USE UL APPROVED WIRE STRIPPER AND WATERPROOF CONNECTIONS AT ALL SPLICES AND CONNECTIONS POINTS.
16. CONTRACTOR SHALL INSTALL TRACER WIRE IN ALL PRESSURE MAINLINE TRENCHES. SEE IRRIGATION DETAILS FOR MORE INFORMATION.
17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ADEQUATE VERTICAL SEPARATION BETWEEN ALL IRRIGATION DISTRIBUTION LINES AND ALL UTILITIES (EXISTING OR PROPOSED), CONDUIT, STORM WATER COMPONENTS, DRAINS, ETC.
18. PLANT MATERIAL LOCATIONS TAKE PRECEDENCE OVER IRRIGATION LINES. COORDINATE INSTALLATION OF IRRIGATION EQUIPMENT SO THAT IT DOES NOT INTERFERE WITH THE PLANTING OF TREES OR OTHER LANDSCAPE MATERIAL INCLUDING PERENNIAL BEDS.
19. THE CONTRACTOR SHALL STAKE THE LOCATION OF THE MAINLINE, DRIP IRRIGATION LINES, CONTROL VALVES, GATE VALVES, ETC. AND SCHEDULE A REVIEW WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
20. LAYOUT DRIP LATERALS PARALLEL TO TOPOGRAPHY WHEREVER POSSIBLE. STAKE 3/4" DRIP TUBING IN PLACE AT 12" DEPTH AND BURY. INSTALL HOSE END FLUSHABLE TYPE END CAP AT ENDS OF ALL 3/4" POLYETHYLENE DRIP TUBING AND FLUSH THOROUGHLY BEFORE INSTALLING EMITTERS.
21. TREES SHALL BE IRRIGATED BY ROOT ZONE WATERING BUBBLERS, SEE EMITTER SCHEDULE FOR ADDITIONAL SHRUBS, GROUNDCOVER AND PERENNIALS SHALL BE IRRIGATED BY PRESSURE REGULATING SINGLE OUTLET EMITTERS, SEE EMITTER SCHEDULE FOR ADDITIONAL INFORMATION.
22. CONTRACTOR SHALL FINE TUNE AND ADJUST NOZZLE DIRECTION AND RADIUS TO REDUCE OVERSPRAY ONTO PAVING OR HARD SURFACES.

IRRIGATION GENERAL NOTES (CONT.)

23. CONTRACTOR SHALL INSTALL A QUICK COUPLER IN 10" VALVE BOX AT THE END OF ALL BRANCHES OF THE MAINLINE, OR AS SHOWN ON PLANS, FOR WINTERIZATION AND FLUSHING OF MAINLINE.
24. ESTABLISHMENT WATERING WILL REQUIRE UP TO TWICE AS MUCH IRRIGATION FOR A 21 DAY PERIOD. THE DESIGN IS BASED ON THE FOLLOWING PROJECTED WEEKLY APPLICATION RATES AFTER ESTABLISHMENT. THESE FIGURES ARE BASED ON A 30-YEAR AVERAGE WEATHER DATA AND WILL NEED TO BE ADJUSTED DUE TO SEASONAL CHANGES AND WEATHER CONDITIONS ABOVE AND BELOW THE AVERAGE VALUES UTILIZED.
 - NATIVE SEED 1.00" PER WEEK (FOR ESTABLISHMENT)
25. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON JUNE 1 AND END ON SEPTEMBER 1 TO INSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
 - CHECK HEADS FOR COVERAGE AND LEAKAGE.
 - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
 - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
 - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
 - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
 - WINTERIZATION AND SPRING START UP PROCEDURES

IRRIGATION POINT OF CONNECTION NOTES:

1. POINT OF CONNECTION: THE POINT OF CONNECTION IS NEAR THE WEST END OF THE EXISTING PLAYGROUND AS SHOWN ON THE PLAN. CONNECT TO EXISTING MAINLINE STUB AT THE GATE VALVE, AND EXTEND MAINLINE TO CONTROL VALVES AS SHOWN. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES, OBTAIN AND PROVIDE PAYMENT FOR ALL PERMITS ASSOCIATED WITH THIS WORK.
2. CONTROLLER LOCATION: THERE IS AN EXISTING TWO-WIRE CONTROLLER ON SITE. CONTRACTOR SHALL CONNECT WIRING AND ASSIGN AND CHECK STATIONS FOR NEW VALVES SHOWN ON THE PLAN, AND ADD EXTENSION MODULES IF NECESSARY. ALL EQUIPMENT INSTALLATION SHALL CONFORM TO ALL LOCAL CODES. **CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.**
3. SYSTEM PRESSURE: **THE SYSTEM HAS BEEN DESIGNED FOR A REQUIRED MINIMUM STATIC PRESSURE OF 70 PSI. MAXIMUM SAFE FLOW OF 36 GPM.** THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE PRESSURE IN THE FIELD AT THE POINT OF CONNECTION AND MAXIMUM DEMAND OF ANY VALVE OR PROGRAM BEFORE CONSTRUCTION BEGINS AND FOR NOTIFYING THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE DESIGN PRESSURE OF THE SYSTEM AND THE MEASURED PRESSURE IN THE FIELD. IF THE CONTRACTOR FAILS TO NOTIFY OWNER'S REPRESENTATIVE OF SUCH DISCREPANCIES, THEN THE CONTRACTOR ASSUMES ALL LIABILITY AND COSTS ASSOCIATED WITH SYSTEM MODIFICATIONS TO ACCOMMODATE THE ACTUAL PRESSURE.

SLEEVING COORDINATION NOTES:

1. **INSTALLATION OF IRRIGATION SLEEVING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.** SLEEVES SHALL BE INSTALLED PRIOR TO THE START OF PAVING OPERATIONS. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE IRRIGATION CONTRACTOR FOR LOCATION AND SIZING OF SLEEVES PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL SLEEVE ALL IRRIGATION DISTRIBUTION LINES, VALVE CONTROL WIRES AND COMMUNICATION WIRES UNDER ALL PAVED SURFACES, WALL FOOTERS, DRAINAGE CHANNELS, INLETS, CATCH BASINS, ETC.
3. ALL SLEEVES SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND EDGE OF ALL OBSTRUCTIONS. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER ANY OBSTRUCTIONS.
4. MARK ALL CURBS OR PAVING WITH AN 'X' AT ALL SLEEVE LOCATIONS.
5. SLEEVING SHALL BE INSTALLED PER THE SIZES AND QUANTITIES SHOWN ON THE PLANS BASED ON THE CHART BELOW. ALL MAINLINE, VALVE CONTROL AND COMMUNICATION WIRES, LATERALS AND 3/4" POLYETHYLENE DRIP TUBING UNDER PAVED SURFACES ARE TO BE INSTALLED IN SEPARATE SLEEVING.

SLEEVED PIPE SIZE/WIRE QTY.	REQUIRED SLEEVE SIZE AND QTY.
3/4"-1" PIPING	4" PVC (1)
1-1/4" - 2" PIPING	4" PVC (1)
1-50 CONTROL WIRES	4" PVC (1)

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	MFR	MODEL NO.	COMMENTS	DETAIL
POC	POINT OF CONNECTION	NA	EXISTING 1-1/2" IRRIGATION SERVICE LINE	REFER TO CIVIL SITE AND UTILITY PLANS	
NOT SHOWN	IRRIGATION CONTROLLER	IRRITROL	RAIN MASTER EAGLE (TW-EG36-SPED) EXISTING	PEDESTAL MOUNT 7 NEW VALVES	
NOT SHOWN	TWO-WIRE VALVE DECODERS	RAIN BIRD	TWO-WIRE DECODER (FD-TURF) LINE SURGE PROTECTION (LSP-01)	SEE IRRIGATION NOTES 13 & 14 FOR GROUNDING	
⚡	GATE VALVE	WATTS	CARSON ROUND VALVE BOX (910) BRONZE GATE VALVE (WGV-X)	SIZE PER LINE	12-02/3
⊕	QUICK COUPLER	RAIN BIRD	CARSON ROUND VALVE BOX (910) 1" COUPLER (LRC-44)		12-01/5
⊙	VALVE ASSEMBLY SEED	RAIN BIRD	CARSON JUMBO VALVE BOX (1220) SCH. 80 PVC BALL VALVE CONTROL VALVE (100/150-PESB)		12-01/4
⊕	VALVE ASSEMBLY DRIP	RAIN BIRD	CARSON JUMBO VALVE BOX (1220) 1" SCH. 80 PVC BALL VALVE 1" CONTROL VALVE (100-PESB) 3/4" PRESSURE REGULATING FILTER (PRF-075) (30 PSI)		12-01/6
⊙ R-VAN 14, R-VAN 131E, R-VAN 172A	NATIVE SEED ROTARY	RAIN BIRD	SEED ROTARY (RVAN 14/18/1724 1812-SAM-P45) FIXED SEED ROTARY (R-1318/1724 1812-SAM-P45) 8'-24" HAND ADJUSTABLE AND FIXED ROTARY STREAM 1812 POP UP SPRAY BODY, SEAL-A-MATIC CHECK VALVE W/ 45 PSI PRESSURE REGULATOR. 1/2" NPT FEMALE THREADED INLET.	0.6" MATCHED PRECIPITATION RATE @ 45 PSI	12-01/8
—	SLEEVING	NA	SCHEDULE 40 PVC PIPE	SEE SLEEVING NOTES	12-01/1
—	PVC MAINLINE	NA	1-1/2" CLASS 200 BE PVC PIPE ALL MAINLINE TO HAVE TRACER WIRE AND TAPE		12-01/2
—	PVC SEED LATERAL	NA	3/4" CLASS 200 PVC PIPE	UNLESS OTHERWISE NOTED ON PLAN	12-01/2
—	DRIP LATERAL	NA	3/4" POLYETHYLENE TUBING		12-01/2
—	FLUSH END CAP	NA	CARSON ROUND VALVE BOX (910) FLUSH END CAP		12-02/3

VALVE CALLOUT	EMITTER SCHEDULE			
	PLANT TYPE	EMITTER	QTY.	TOTAL GPH
	PERENNIALS/GRASSES	0.5 GPH	ONE EACH	0.5 GPH
	DECIDUOUS SHRUBS	0.5 GPH	TWO EACH	1.0 GPH
	EVERGREEN SHRUBS	0.5 GPH	TWO EACH	1.0 GPH
	DECIDUOUS TREE	1.0 GPH	SIX EACH	6.0 GPH
	EVERGREEN TREE	1.0 GPH	SIX EACH	6.0 GPH

- EMITTER NOTES
1. ALL PLANT MATERIAL SHALL BE IRRIGATED WITH RAINBIRD XB SERIES PRESSURE REGULATING EMITTERS.
 2. EMITTER SCHEDULE IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL ADJUST EMITTER AND NUMBER OF EMITTERS BASED ON THE NEEDS OF INDIVIDUAL PLANTS OR PLANT HYDROZONES.
 3. 1/4" DISTRIBUTION TUBING NOT TO EXCEED 8' IN LENGTH.
 4. RAINBIRD DBC-025 DIFFUSER BUG CAP AND TS-025 STAKE ON ALL 1/4" DISTRIBUTION TUBING.

SYMBOL	DESCRIPTION	NATIVE SEED	IRRIGATION APPLICATION
⊙	IRRIGATED DRYLAND SEED		SHALL BE 12" POP-UP ROTARY. IRRIGATED AT APPROXIMATELY 60%-70% COVERAGE FOR ESTABLISHMENT AND ARE ZONED SEPARATELY TO BE TURNED OFF AFTER THE ESTABLISHMENT PERIOD.

FRISCO PENINSULA
 PARKING LOT EXPANSION
 FRISCO, CO
 CONSTRUCTION DOCUMENTS

OWNER:
 TOWN OF FRISCO
 1 MAIN STREET
 FRISCO, CO
 970.668.5276
 970.668.0677



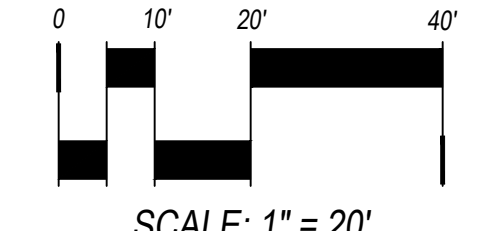
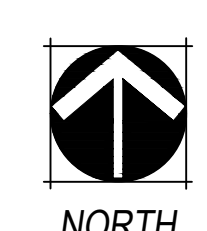
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SHEET TITLE:
 IRRIGATION PLAN

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IRRIGATION SCHEDULE

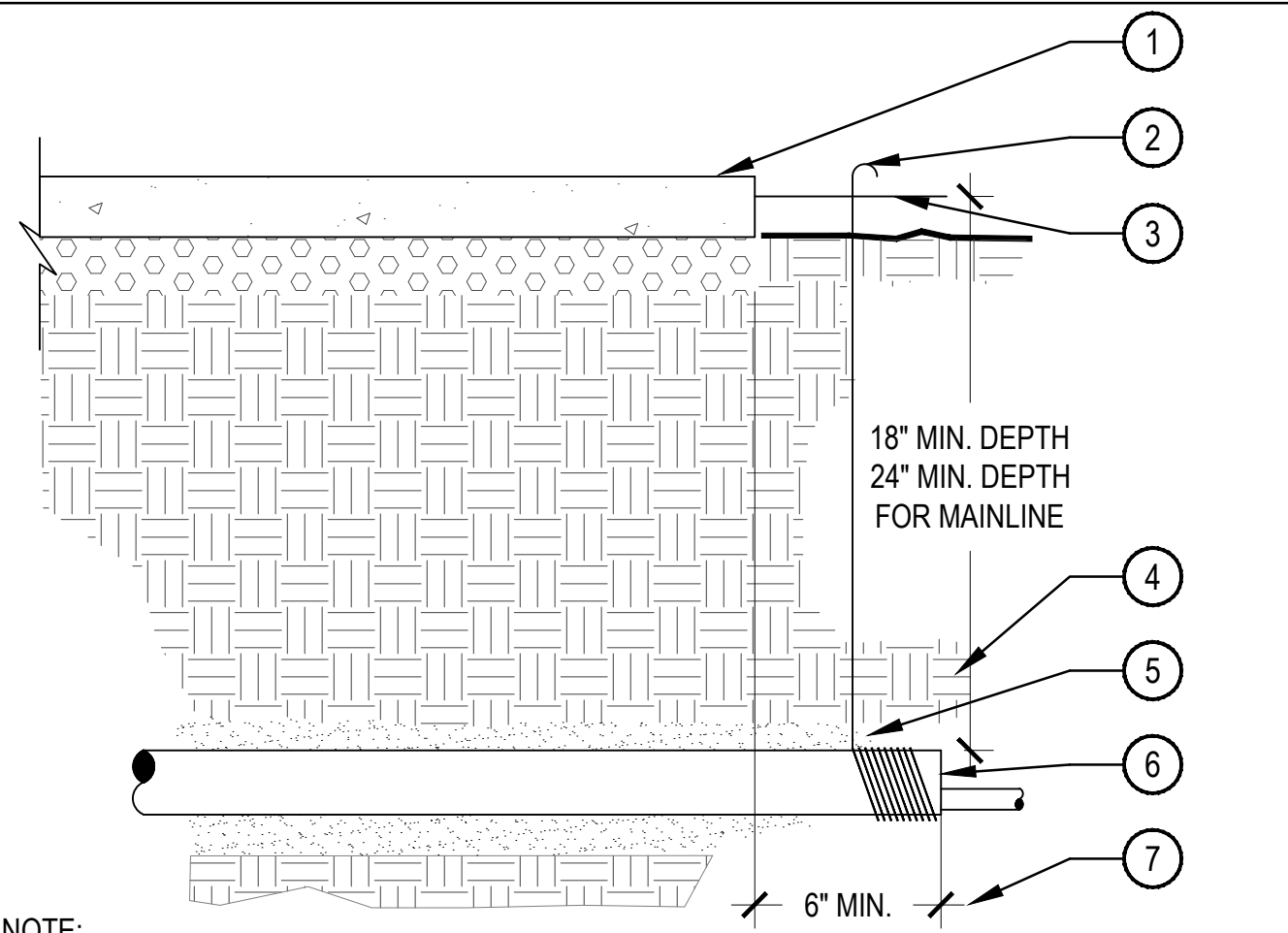
SYMBOL	DESCRIPTION	DETAIL
POC	POINT OF CONNECTION	
NOT SHOWN	IRRIGATION CONTROLLER	
NOT SHOWN	TWO-WIRE VALVE DECODERS	
	GATE VALVE	12-02/3
	QUICK COUPLER	12-01/5
	VALVE ASSEMBLY SEED	12-01/4
	VALVE ASSEMBLY DRIP	12-01/6
	NATIVE SEED ROTARY	12-01/8
	SLEEVING	12-01/1
	PVC MAINLINE	12-01/2
	PVC SEED LATERAL	12-01/2
	DRIP LATERAL	12-01/2
	FLUSH END CAP	12-02/3
VALVE CALLOUT		
	VALVE/STATION # ZONE DESIGNATION: T(TREES), S(SHRUBS), N(SEED)	
	VALVE FLOW (GPM) VALVE SIZE	
NATIVE SEED		
SYMBOL	DESCRIPTION	
	IRRIGATED DRYLAND SEED	



SCALE: 1" = 20'



CHECKED BY: MT
 DRAWN BY: AR, LM, EN

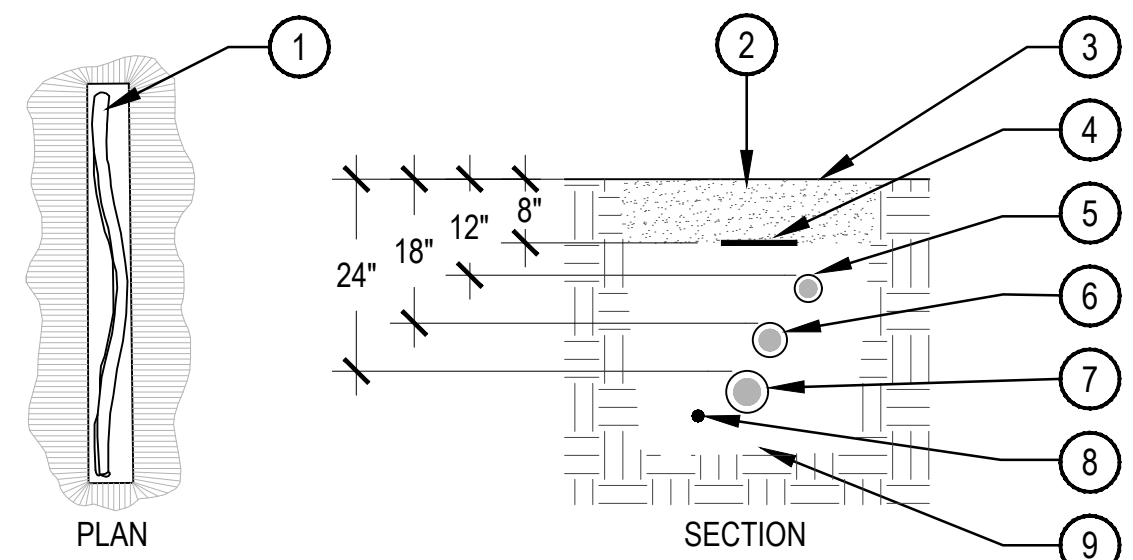


- 1 PAVING
- 2 WRAP 12 GAUGE GALVANIZED WIRE AROUND EACH END OF SLEEVE (10 WRAPS MIN.) AND EXTEND TO SURFACE AS A LOCATING DEVICE.
- 3 FINISH GRADE / TOP OF DG.
- 4 COMPACT SOIL AROUND SLEEVE TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL.
- 5 WASHED AND GRADED MORTAR SAND BACKFILL IN ROCKY SOIL CONDITIONS.
- 6 PVC SLEEVE PER SCHEDULE. TWICE DIAMETER OF THE SUM OF THE PIPES/ WIRES
- 7 EXTEND SLEEVES 6" BEYOND EDGES OF PAVING

NOTE:
 1. ALL SLEEVES SHALL BE INSPECTED PRIOR TO BACKFILLING.
 2. CAP SLEEVES UNTIL USE.
 3. MULTIPLE SLEEVES REQUIRE 4" HORIZONTAL SEPARATION WITHIN SAME SLEEVE TRENCH.
 4. IRRIGATION PIPE AND WIRE SHALL NOT SHARE THE SAME SLEEVE.
 5. MARK / STAMP - 'X' AND/OR INSTALL PLACARD AT BACK OF CURB.

1 IRRIGATION SLEEVE

SCALE: NTS

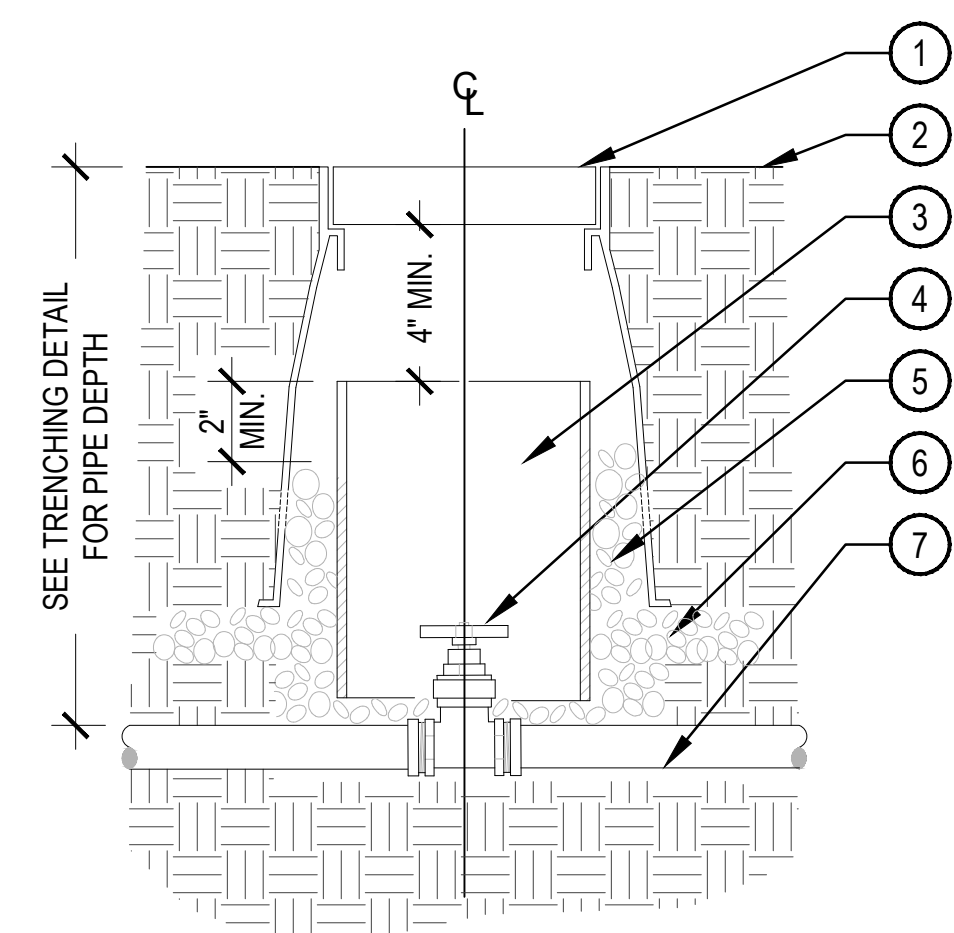


- 1 SNAKE PVC OR POLYETHYLENE PIPE IN TRENCH
- 2 EXCAVATED COVER MATERIAL (SEE NOTES)
- 3 FINISH GRADE
- 4 INDICATOR TAPE (MAIN LINE)
- 5 POLYETHYLENE DRIP LATERAL (12" MIN. COVERAGE, 18" MIN. COVERAGE BELOW PEDESTRIAN WALKS.)
- 6 IRRIGATION SUB-MAIN LATERAL
- 7 IRRIGATION MAINLINE
- 8 VALVE WIRING
- 9 BEDDING MATERIAL (SEE NOTES)

NOTE:
 1. ALL MAINLINES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. ALL PVC PIPING TO BE SNAKED IN TRENCHES AS SHOWN IN PLAN VIEW ABOVE.
 3. ALL 120 VOLT WIRING IN CONDUIT TO BE INSTALLED AS PER LOCAL CODES.
 4. ALL ELECTRICAL WIRE CONNECTIONS TO VALVES AND SPLICES TO BE INSTALLED WITHIN A VALVE BOX AND MADE WITH DBY WATERPROOF CONNECTORS, OR APPROVED EQUAL.
 5. BUNDLE AND TAPE WIRING AT 10' INTERVALS
 6. VALVE WIRES TO BE INSTALLED WITHIN MAINLINE TRENCH WHEREVER POSSIBLE.
 7. BEDDING MATERIAL SHALL BE 1/4" MINUS SAND, AND SHALL BE 3" BELOW LOWEST PIPE OR WIRE AND 3" ABOVE HIGHEST PIPE OR WEIR WITHIN TRENCH.
 8. BEDDING MATERIAL SHALL BE IN MAINLINE TRENCH ONLY.
 9. BEDDING IS NOT REQUIRED IN POLYETHYLENE TUBING TRENCHES.
 10. EXCAVATED COVER MATERIAL SHALL BE FREE FROM DEBRIS AND ROCKS 1/2" OR GREATER.
 11. PIPE BEDDING MATERIAL TO BE ROCK AND DEBRIS FREE, BACKFILL IN 6" LIFTS, PUDDLE WITH WATER, BETWEEN LIFTS.

2 IRRIGATION TRENCH

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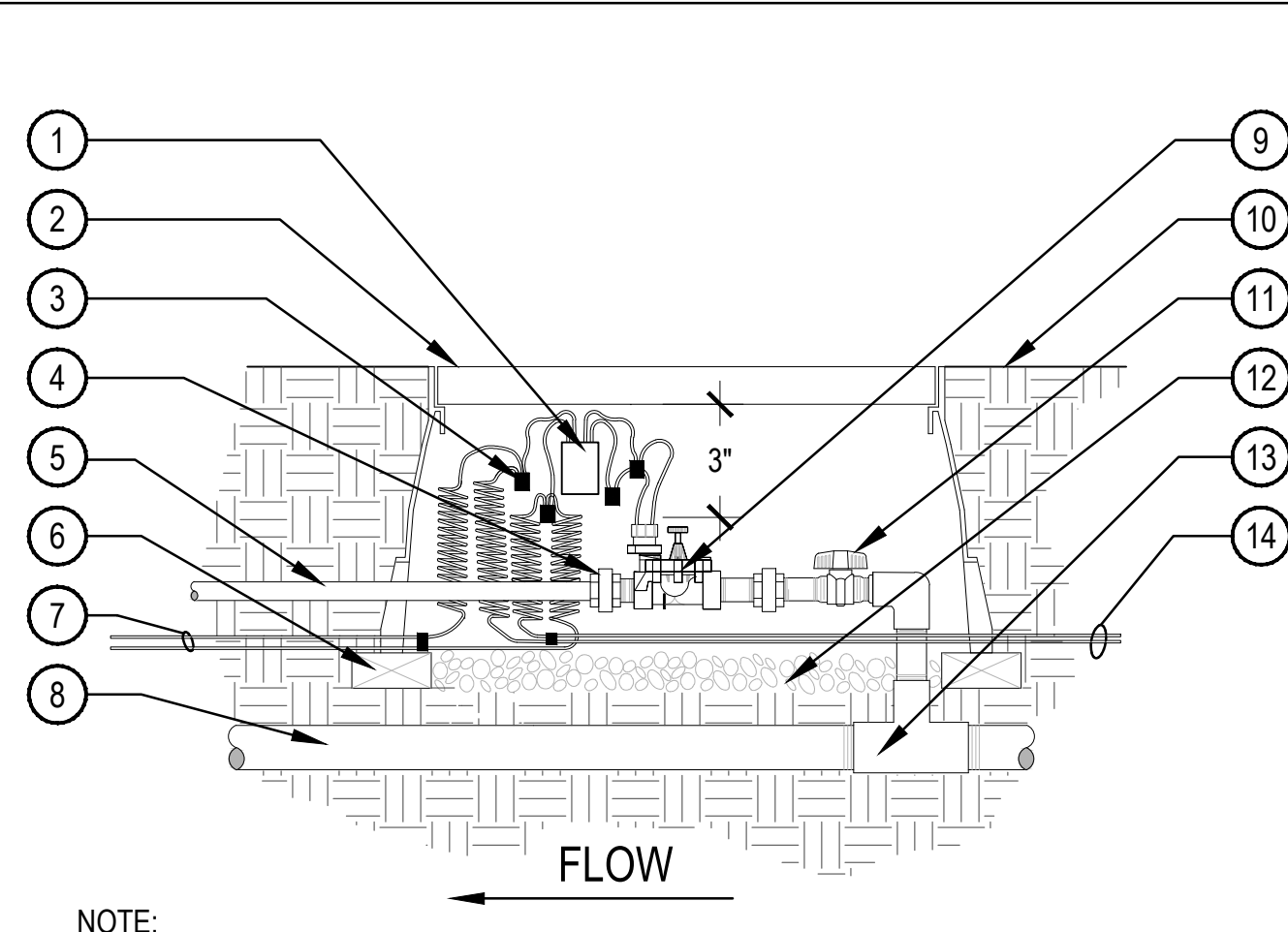


- 1 LOCKING ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
- 2 FINISH GRADE
- 3 2" CL160 PVC ACCESS SLEEVE LENGTH AS REQUIRED.
- 4 GATE VALVE W/ CROSS HANDLE AND SOLID WEDGE DISC PER SCHEDULE
- 5 3/4" GRAVEL SUMP FILL IN AND AROUND BOX AS REQUIRED.
- 6 3" DEPTH 3/4" GRAVEL EXTEND 6" BEYOND EDGE OF BOX
- 7 PVC MAINLINE AS PER PLAN

NOTE:
 1. COMPACT SOIL AROUND GATE VALVE ASSEMBLY TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.
 2. DO NOT REST VALVE BOX OR ACCESS SLEEVES ON MAINLINE OR LATERAL LINE.
 3. PROVIDE GATE VALVE KEY - LENGTH AS REQUIRED.

3 GATE VALVE 3" & SMALLER

SCALE: NTS

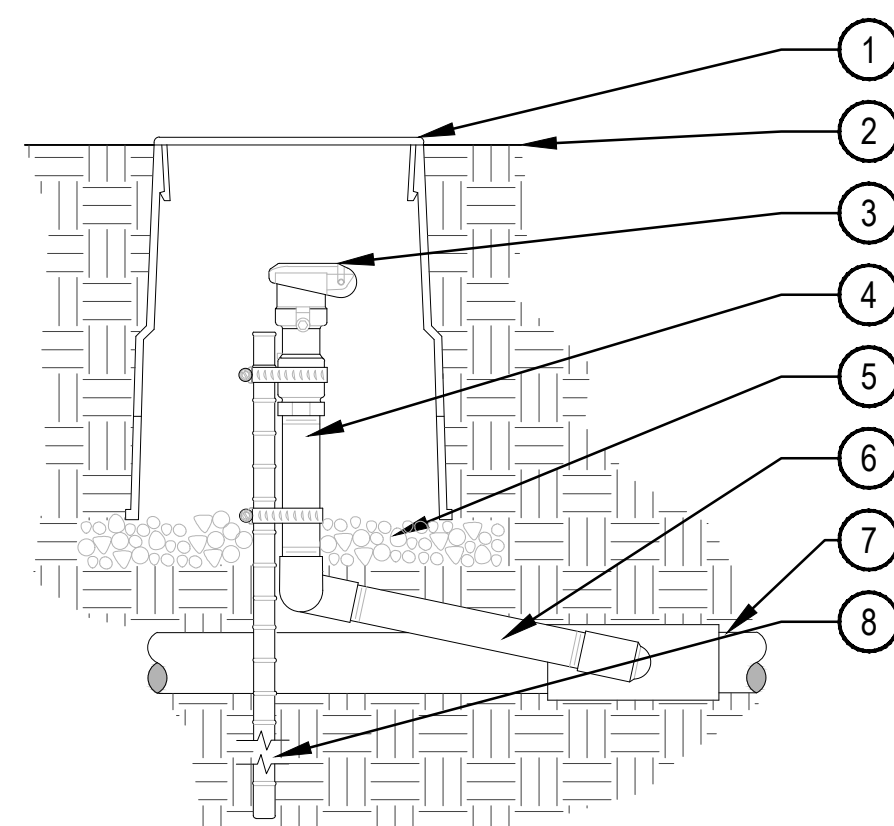


- 1 TWO WIRE DECODER
- 2 PLASTIC LOCKING VALVE BOX PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
- 3 WATERPROOF CONNECTORS
- 4 SCH. 80 PVC UNION (TYP.)
- 5 3/4" POLY LATERAL
- 6 BRICK SUPPORTS 4 MIN.
- 7 ID PATH WIRE TO NEXT DECODER
- 8 PVC MAINLINE
- 9 VALVE ASSEMBLY
- 10 FINISH GRADE
- 11 PVC BALL VALVE PER SCHEDULE
- 12 3/4" GRAVEL SUMP - 4" DEPTH
- 13 SCH. 80 TEE W/ SCH. 80 NIPPLE
- 14 ID PATH WIRES FROM CONTROLLER

NOTE:
 1. SEAL WIRE ENDS WITH WATERPROOF SPLICING MATERIAL
 2. 30" MIN. LENGTH OF PATH WIRE COILED AND PLACED IN BOX AT WATERPROOF CONNECTION TO SOLENOID.
 3. INSTALL DECODERS PER MANUFACTURER'S SPECIFICATIONS FOR WIRING AND GROUNDING.

4 TURF VALVE ASSEMBLY W/ DECODER

SCALE: NTS

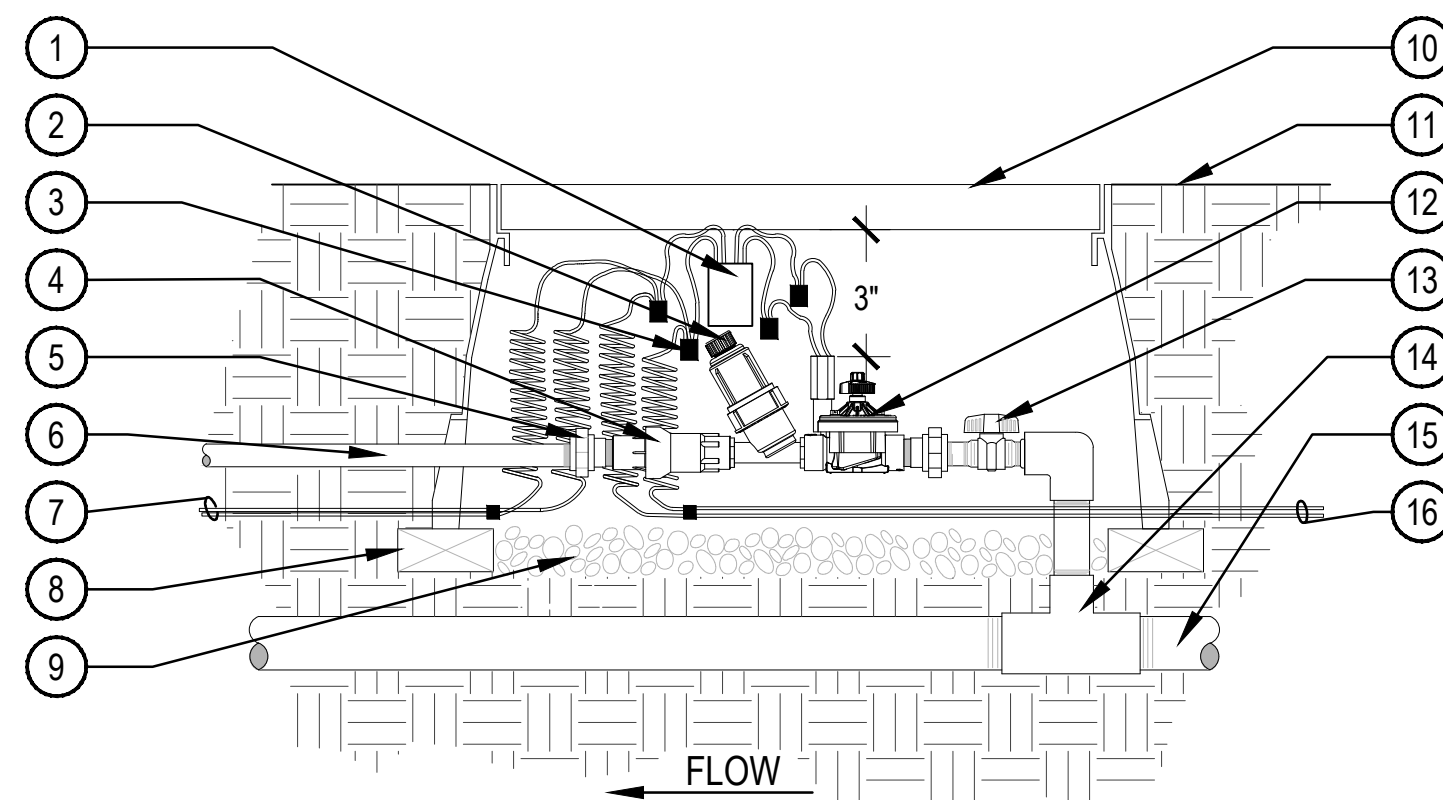


- 1 6" ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
- 2 FINISH GRADE
- 3 QUICK COUPLER VALVE W/ LOCKING COVER PER SCHEDULE
- 4 SCH. 80 NIPPLE
- 5 3" DEPTH 3/4" GRAVEL BASE EXTEND 6" BEYOND EDGE OF BOX
- 6 1" PVC SWING JOINT
- 7 PVC MAINLINE
- 8 24" #4 REBAR TO HOLD COUPLER IN PLACE W/ (2) STAINLESS STEEL CLAMPS

NOTE:
 1. EACH QUICK COUPLER SHALL BE IN A SEPARATE VALVE BOX
 2. PROVIDE (1) QUICK COUPLER KEY FOR EACH QUICK COUPLER VALVE.
 3. QUICK COUPLER SHALL HAVE YELLOW LOCKING RUBBER COVER
 4. COMPACT SOIL AROUND GATE VALVE ASSEMBLY TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.
 5. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.

5 QUICK COUPLER

SCALE: NTS

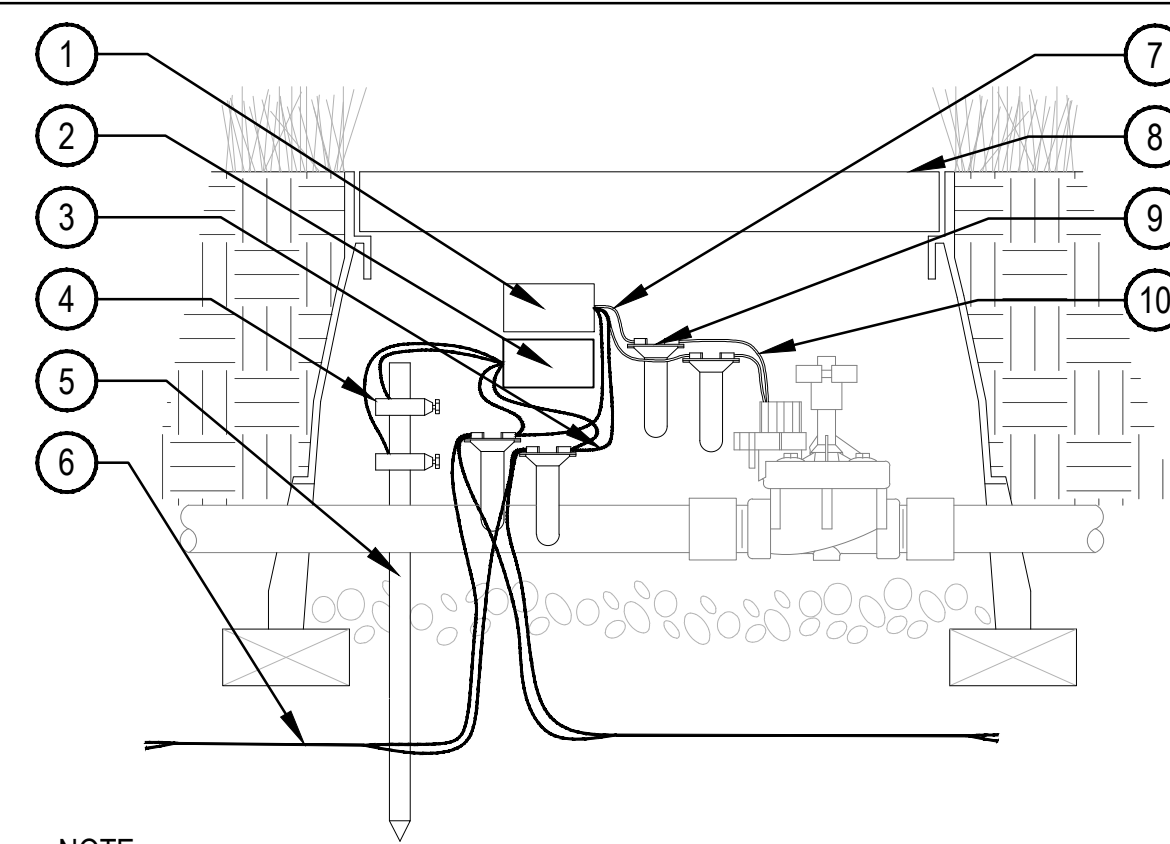


- 1 TWO WIRE DECODER
- 2 WYE FILTER PER SCHEDULE
- 3 WATERPROOF CONNECTORS
- 4 PRESSURE REGULATOR PER SCH.
- 5 SCH. 80 PVC UNION
- 6 POLYETHYLENE DRIP LATERAL
- 7 WIRE TO NEXT DECODER(S)
- 8 BRICK SUPPORTS 4 MIN.
- 9 4" DEPTH GRAVEL SUMP.
- 10 PLASTIC LOCKING VALVE BOX PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
- 11 FINISH GRADE
- 12 VALVE ASSEMBLY
- 13 PVC BALL VALVE PER SCHEDULE
- 14 SCH. 80 TEE W/ SCH. 80 NIPPLE
- 15 PVC MAINLINE
- 16 WIRES FROM CONTROLLER

NOTE:
 1. SEAL WIRE ENDS WITH WATERPROOF SPLICING MATERIAL
 2. 30" MIN. LENGTH OF PATH WIRE COILED AND PLACED IN BOX AT WATERPROOF CONNECTION TO SOLENOID.
 3. INSTALL DECODERS PER MANUFACTURER'S SPECIFICATIONS FOR WIRING AND GROUNDING.

6 DRIP VALVE ASSEMBLY W/ DECODER

SCALE: NTS

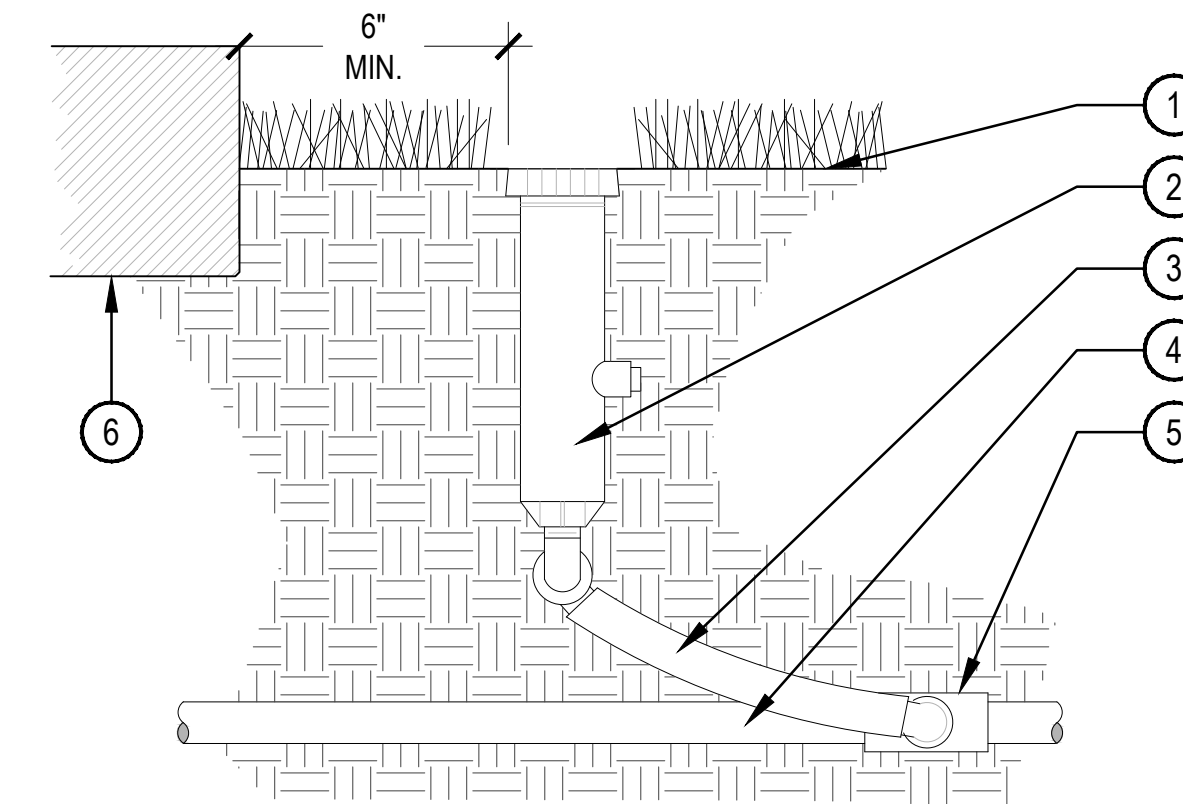


- 1 FIELD DECODER (WITHOUT LINE SURGE PROTECTION: RAIN BIRD FD-101 TURF, FD-102TURF OR FD-202TURF FIELD DECODER)
- 2 LINE SURGE PROTECTOR: RAIN BIRD LSP-TURF M10008
- 3 BLUE WIRE FROM FIELD DECODER
- 4 DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 4)
- 5 GROUNDING ROD: 10 OHMS OR LESS
- 6 TWO-WIRE / COMMUNICATION CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
- 7 WHITE WIRE FROM FIELD DECODER (1 OF 2)
- 8 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-S TD
- 9 DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 4)
- 10 SOLENOID WIRE (1 OF 2)

NOTE:
 1. LSP-1TURF SHALL BE INSTALLED EVERY 500-FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
 2. MAX. LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO SOLENOID IS 450 FT.
 3. PLACE 3 FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.
 4. RAIN BIRD FD-401TURF AND FD-601TURF FIELD DECODERS COME WITH LSP-1TURF'S BUILT-IN. FD-101TURF, FD-102TURF AND FD-202TURF REQUIRE SEPARATE LSP-1TURF SURGE PROTECTION.

7 RAINBIRD LSP-1TURF AND LIGHTNING SUPPRESSOR

SCALE: NTS

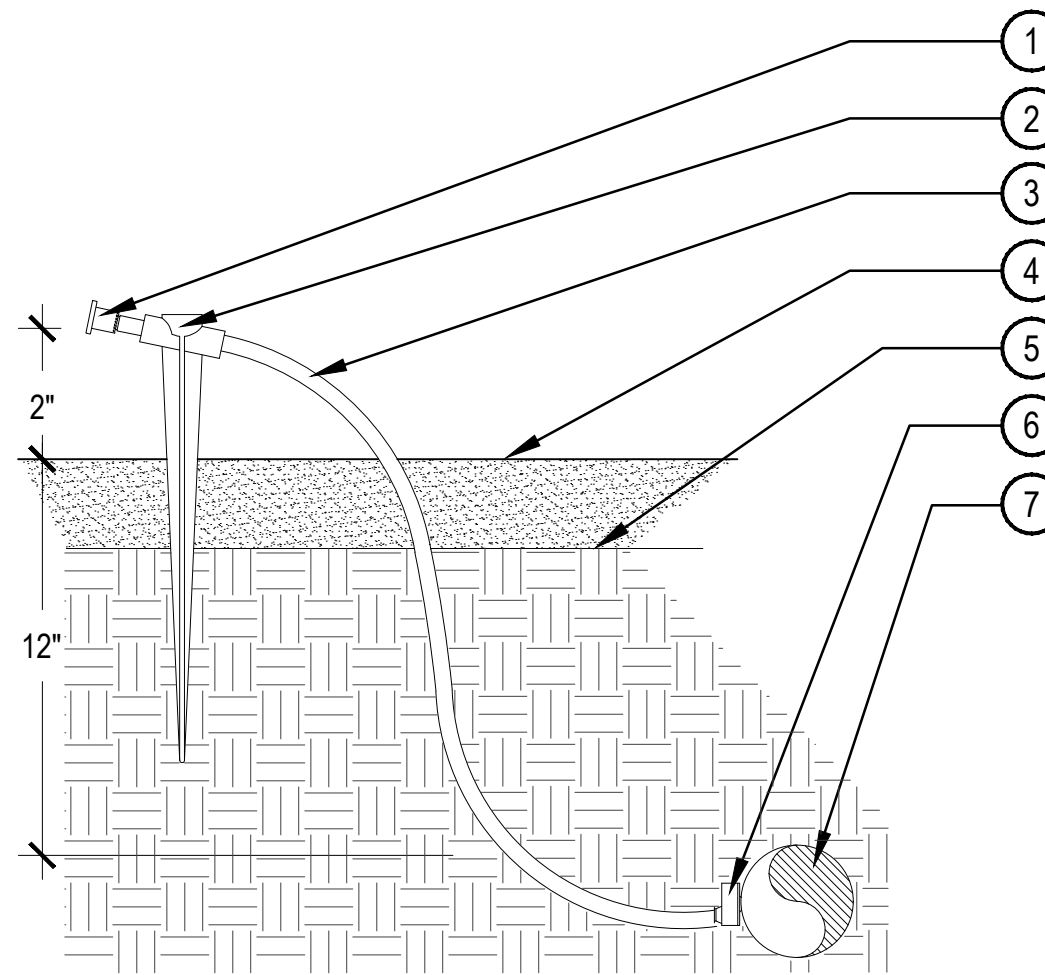


- 1 FINISH GRADE
- 2 POP-UP SPRAY SPRINKLER PER SCHEDULE
- 3 FLEXIBLE SWING JOINT - 18" MAX
- 4 PVC LATERAL PIPE
- 5 PVC SCH. 40 TEE OR ELL, THREADED
- 6 EDGE OF PAVING OR HEADER

NOTE:
 1. AFTER FLUSHING HEADS, REGRADE AND COMPACT AS NEEDED TO RETURN TO FINISH GRADE.
 2. SPRINKLERS SHALL BE MIN. 6" FROM ANY WALLS, WALKS, COURTS, AND 12" FROM TURF EDGE.
 3. ADJUST ALL SPRINKLERS HEADS SO THAT NO OVERSPRAY OCCURS ON ANY WALLS, WALKS, COURTS, ETC.
 4. ALL THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE.
 5. COMPACT SOIL AROUND HEAD TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.

8 POP-UP SPRAY ASSEMBLY

SCALE: NTS



- 1 DBC-25 DIFFUSER CAP
- 2 UNIVERSAL 1/4" TUBING STAKE
- 3 1/4" DISTRIBUTION TUBING: LENGTH NOT TO EXCEED 8'
- 4 TOP OF MULCH
- 5 FINISH GRADE
- 6 PRESSURE COMPENSATING EMITTER PER EMITTER SCHEDULE. LOCATE ON TOP OR SIDE OF DRIP LATERAL
- 7 3/4" POLYETHYLENE TUBING DEPTH PER DETAIL

9 SINGLE OUTLET EMITTER

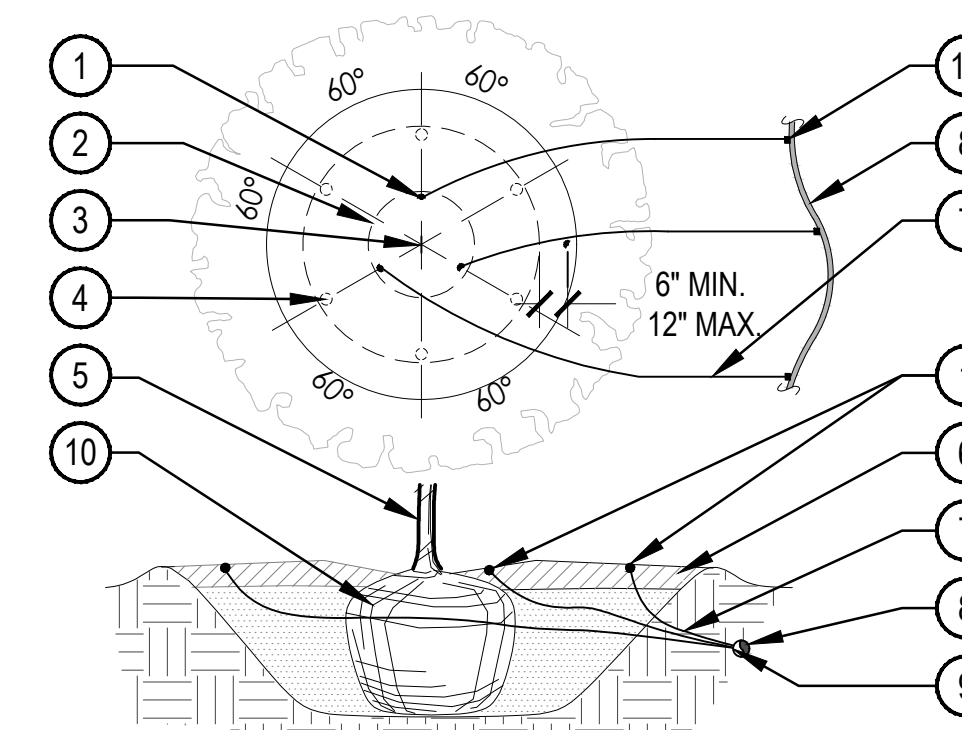
SCALE: NTS

OWNER:
 TOWN OF FRISCO
 1 MAIN STREET
 FRISCO, CO
 970.668.5276
 970.668.0677



DATE:
 04.09.2019
 100% CD SET

SHEET TITLE:
 IRRIGATION
 DETAILS

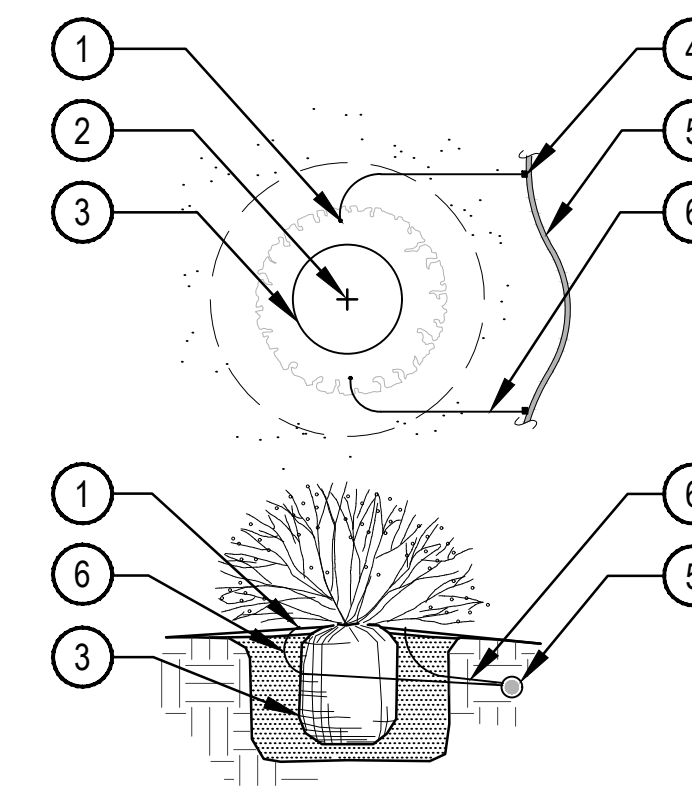


- 1 EMISSION POINT, DIFFUSER CAP W/ DRIP STAKE (TYP.)
- 2 PLANT ROOT BALL (TYP.)
- 3 PLANT CENTER (TYP.)
- 4 SECOND EMISSION POINTS SEE NOTE 3 BELOW
- 5 TREE TRUNK
- 6 MULCH LAYER
- 7 1/4" DISTRIBUTION TUBING (LENGTH NOT TO EXCEED 8')
- 8 3/4" POLYETHYLENE DRIP TUBING
- 9 SINGLE OUTLET EMITTER
- 10 ROOTBALL

NOTE:
 1. MAXIMUM LENGTH OF ONE DISTRIBUTION TUBE SHALL BE 8'.
 2. ALL EMISSION POINTS SHALL BE LOCATED ON UPHILL SIDE OF PLANT MATERIAL. ONE EMISSION POINT SHALL BE DIRECTLY TO PLANT BALL AS INDICATED. ADDITIONAL EMISSION POINTS SHALL BE WITHIN PLANT PIT PERIMETER AS DIRECTED IN THE EMITTER SCHEDULE.
 3. SECOND EMISSION POINTS (IF NEEDED) AS PER THE EMITTER SCHEDULE FOR TREES WITH 3" CALIPER OR GREATER OR CONIFEROUS TREES 10' OR GREATER IN HEIGHT.
 4. THIS IS A WATERING GUIDE ONLY. SITE, SOIL AND PLANT CONDITIONS VARY GREATLY. CONTRACTOR MUST OBSERVE THE PLANT MATERIAL AND MAKE ADJUSTMENTS AS NECESSARY FOR PROPER PLANT WATER REQUIREMENT.

1 TREE EMITTER PLACEMENT

SCALE: NTS

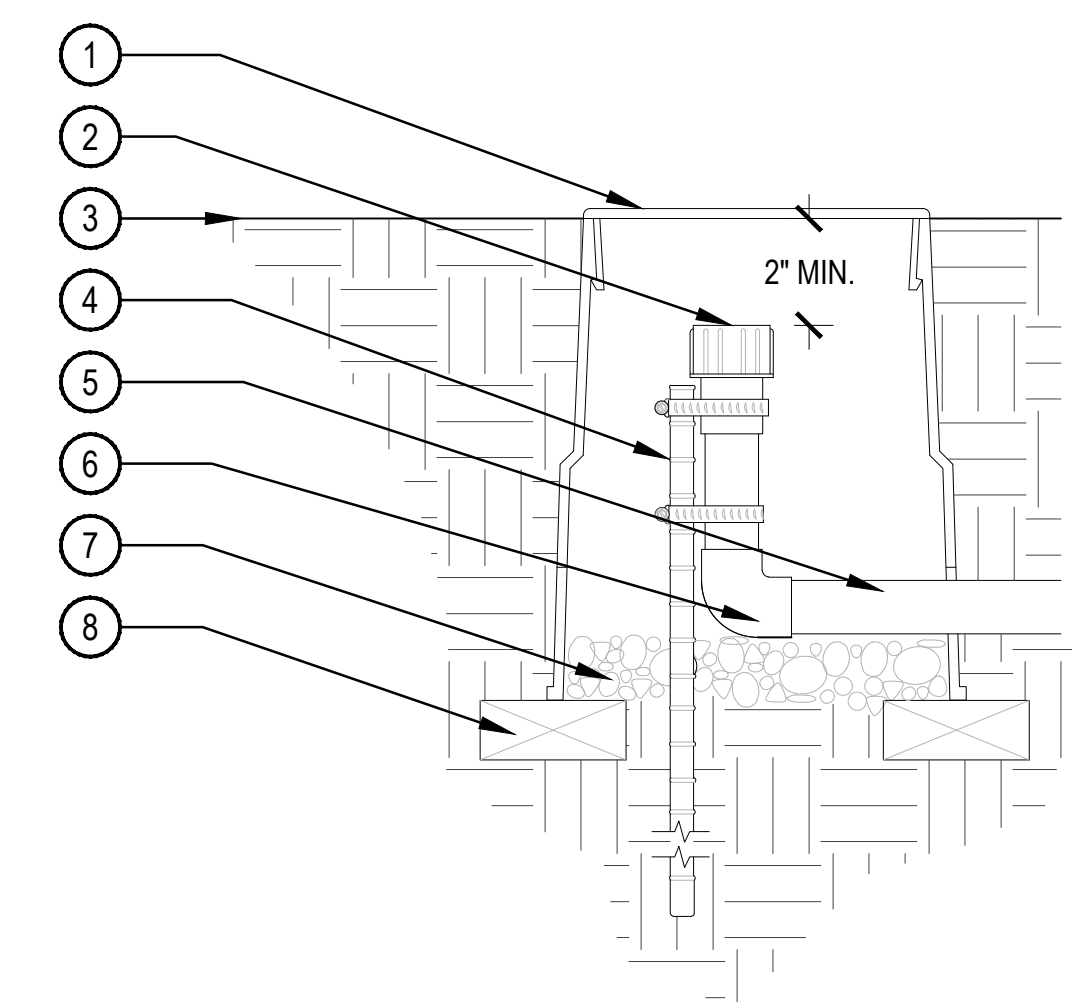


- 1 DIFFUSER CAP W/ DRIP STAKE
- 2 PLANT CENTER
- 3 PLANT ROOTBALL
- 4 SINGLE OUTLET EMITTER
- 5 3/4" POLYETHYLENE DRIP TUBING
- 6 1/4" DISTRIBUTION TUBING (LENGTH NOT TO EXCEED 8')

NOTE:
 1. EMITTERS SHALL BE EQUALLY SPACED AROUND ROOTBALL.
 2. FLUSH ALL LINES THOROUGHLY PRIOR TO EMITTER INSTALLATION.
 3. IF PLANTING ON A 4:1 SLOPE OR STEEPER, INSTALL EMITTERS ON THE UPHILL SIDE OF PLANT.
 4. DRIP VALVE ZONES (HYDROZONES) ARE DESIGNED TO ACCOUNT FOR DIFFERENCES IN PLANT REQUIREMENTS AND SUN EXPOSURE.
 5. CONTRACTOR SHALL ENSURE HYDROZONES ARE VALVED SEPARATELY AS SHOWN ON PLAN.

2 SHRUB EMITTER PLACEMENT

SCALE: NTS



- 1 LOCKING ROUND BOX & COVER PER SCHEDULE. TOP OF BOX TO BE FLUSH WITH FINISH GRADE
- 2 HOSE END SELF FLUSH CAP
- 3 FINISH GRADE
- 4 24" #4 REBAR TO HOLD END CAP IN PLACE W/ (2) STAINLESS STEEL CLAMPS
- 5 POLYETHYLENE LATERAL
- 6 ELBOW COMPRESSION FITTING
- 7 3/4" GRAVEL SUMP- 4" DEPTH
- 8 BRICK (2 REQUIRED MIN.)

NOTE:
 1. COMPACT SOIL AROUND VALVE BOX TO THE SAME DENSITY AS ADJACENT UNDISTURBED SUBGRADE.
 2. SECURE STAKE TO FLUSH END CAP WITH A MIN. OF TWO S.S. CLAMPS.

3 DRIP FLUSH END CAP

SCALE: NTS