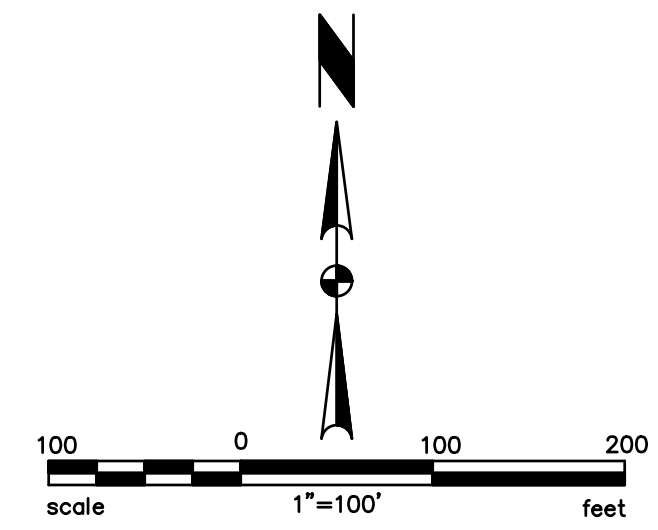


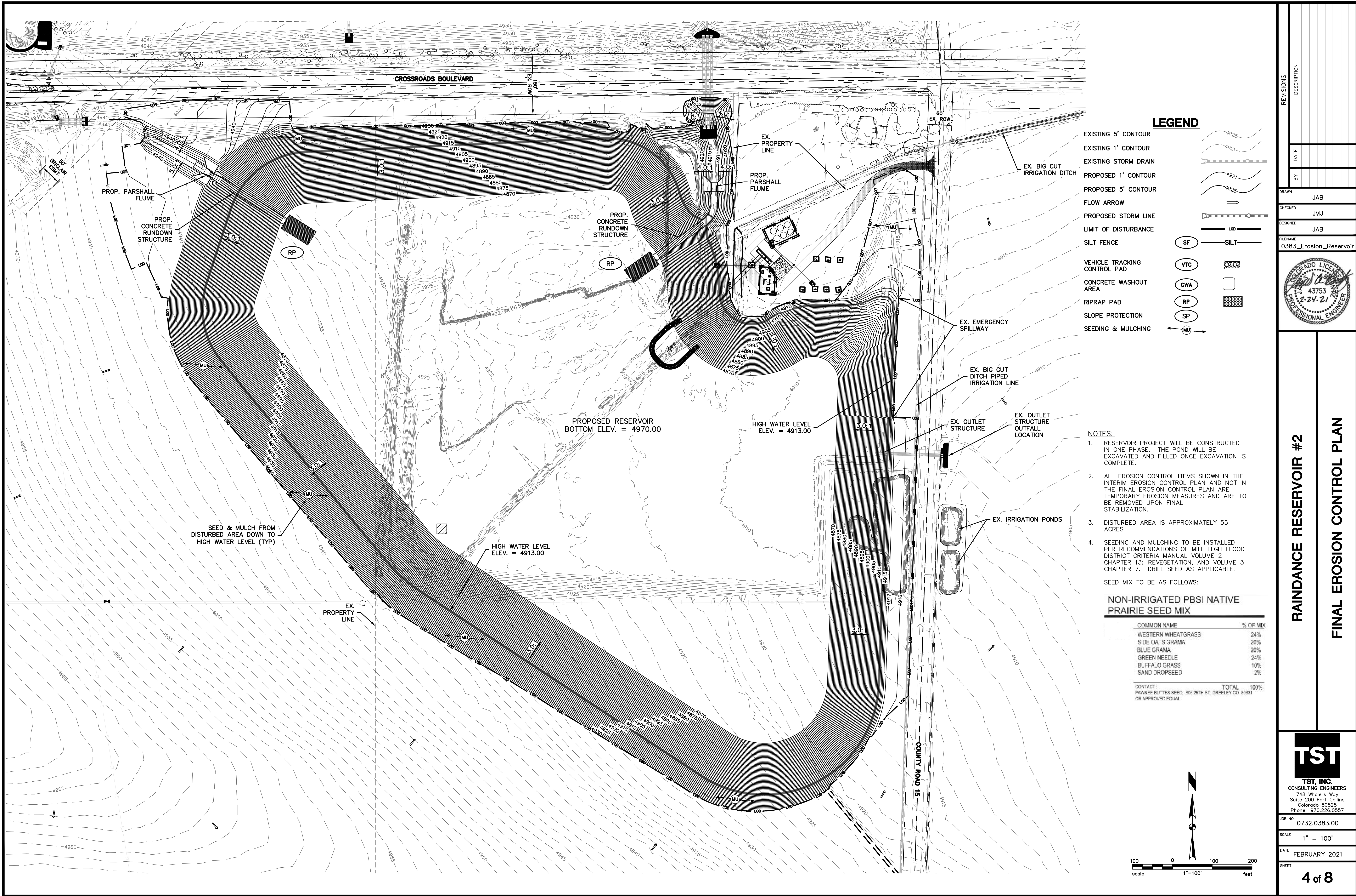
LEGEND

- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING STORM DRAIN
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- FLOW ARROW
- PROPOSED STORM LINE
- LIMIT OF DISTURBANCE
- SILT FENCE
- VEHICLE TRACKING CONTROL PAD
- CONCRETE WASHOUT AREA
- RIPRAP PAD
- SLOPE PROTECTION
- SEEDING & MULCHING

- NOTES:**
- RESERVOIR PROJECT WILL BE CONSTRUCTED IN ONE PHASE. THE POND WILL BE EXCAVATED AND FILLED ONCE EXCAVATION IS COMPLETE.
 - ALL EROSION CONTROL ITEMS SHOWN IN THE INTERIM EROSION CONTROL PLAN ARE TEMPORARY EROSION MEASURES AND ARE TO BE REMOVED UPON FINAL STABILIZATION.
 - DISTURBED AREA IS APPROXIMATELY 55 ACRES
 - STREET SWEEPING AND VACUUMING MAY BE IMPLEMENTED AS NEEDED IF EXCESSIVE SEDIMENT ACCUMULATION OCCURS AT CONSTRUCTION ENTRANCE OFF OF CROSSROADS BOULEVARD.



REVISIONS		DESCRIPTION	
DATE	BY		
DRAWN		JAB	
CHECKED		JMJ	
DESIGNED		JAB	
FILENAME		0383_Erosion_Reservoir	
		RAINDANCE RESERVOIR #2	
		INTERIM EROSION CONTROL PLAN	
		TST, INC. CONSULTING ENGINEERS 748 Whalers Way Suite 200 Fort Collins Colorado 80525 Phone: 970.226.0557	
JOB NO.		0732.0383.00	
SCALE		1" = 100'	
DATE		FEBRUARY 2021	
SHEET		3 of 8	



LEGEND

- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING STORM DRAIN
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- FLOW ARROW
- PROPOSED STORM LINE
- LIMIT OF DISTURBANCE
- SILT FENCE
- VEHICLE TRACKING CONTROL PAD
- CONCRETE WASHOUT AREA
- RIPRAP PAD
- SLOPE PROTECTION
- SEEDING & MULCHING

- NOTES:
- RESERVOIR PROJECT WILL BE CONSTRUCTED IN ONE PHASE. THE POND WILL BE EXCAVATED AND FILLED ONCE EXCAVATION IS COMPLETE.
 - ALL EROSION CONTROL ITEMS SHOWN IN THE INTERIM EROSION CONTROL PLAN AND NOT IN THE FINAL EROSION CONTROL PLAN ARE TEMPORARY EROSION MEASURES AND ARE TO BE REMOVED UPON FINAL STABILIZATION.
 - DISTURBED AREA IS APPROXIMATELY 55 ACRES
 - SEEDING AND MULCHING TO BE INSTALLED PER RECOMMENDATIONS OF MILE HIGH FLOOD DISTRICT CRITERIA MANUAL VOLUME 2 CHAPTER 13: REVEGETATION, AND VOLUME 3 CHAPTER 7. DRILL SEED AS APPLICABLE.
- SEED MIX TO BE AS FOLLOWS:

NON-IRRIGATED PBSI NATIVE PRAIRIE SEED MIX	
COMMON NAME	% OF MIX
WESTERN WHEATGRASS	24%
SIDE OATS GRAMA	20%
BLUE GRAMA	20%
GREEN NEEDLE	24%
BUFFALO GRASS	10%
SAND DROPSEED	2%
CONTACT : PAWNEE BUTTES SEED, 605 25TH ST, GREELEY CO 80631	TOTAL 100%
OR APPROVED EQUAL	

REVISIONS

DESCRIPTION

DATE

BY

JAB

JMJ

JAB

FILENAME

0383_Erosion_Reservoir

RAINANCE RESERVOIR #2

FINAL EROSION CONTROL PLAN

TST, INC.
CONSULTING ENGINEERS
748 Whalers Way
Suite 200 Fort Collins
Colorado 80525
Phone: 970.226.0557

JOB NO.

0732.0383.00

SCALE

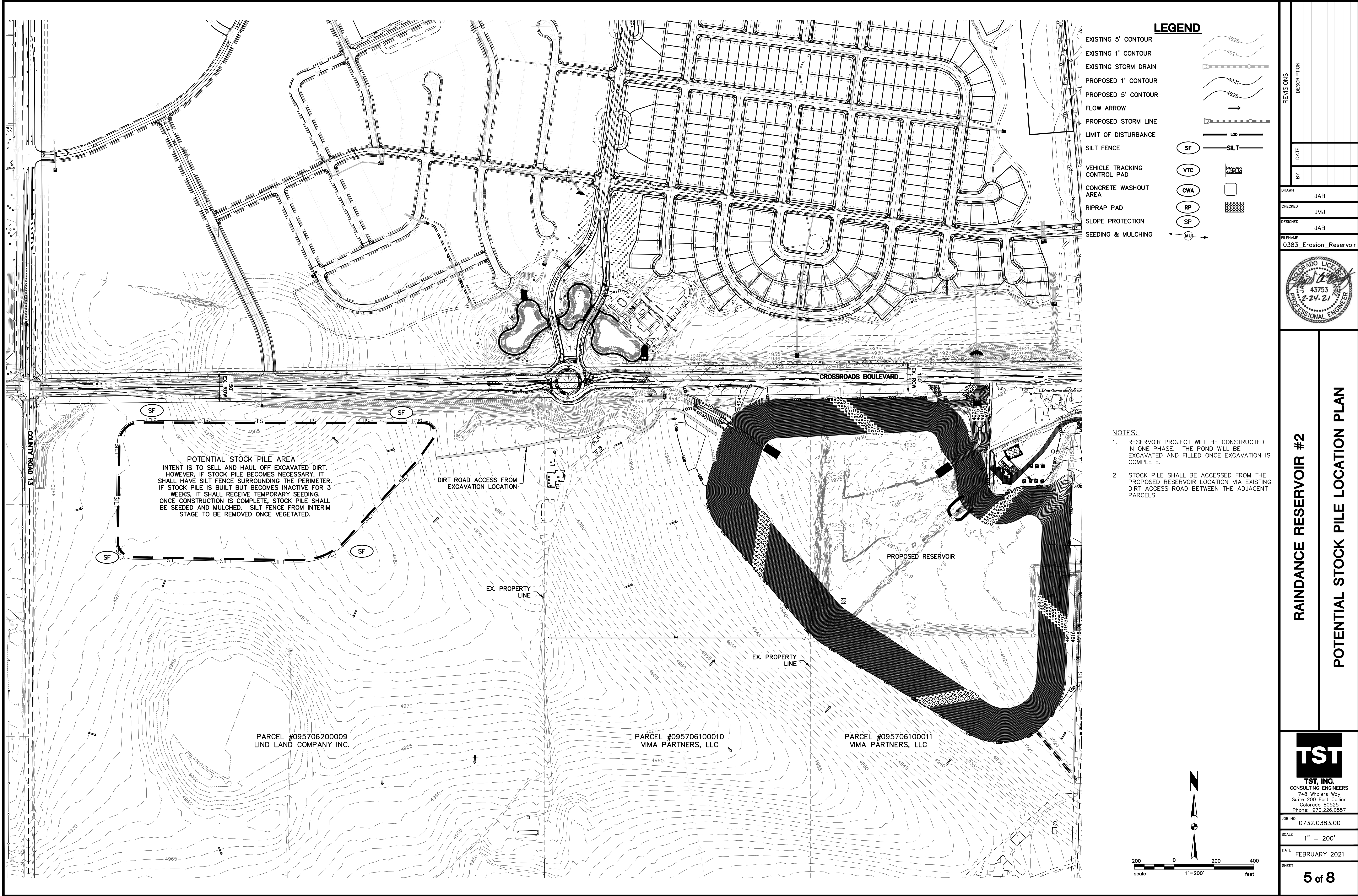
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DATE

FEBRUARY 2021

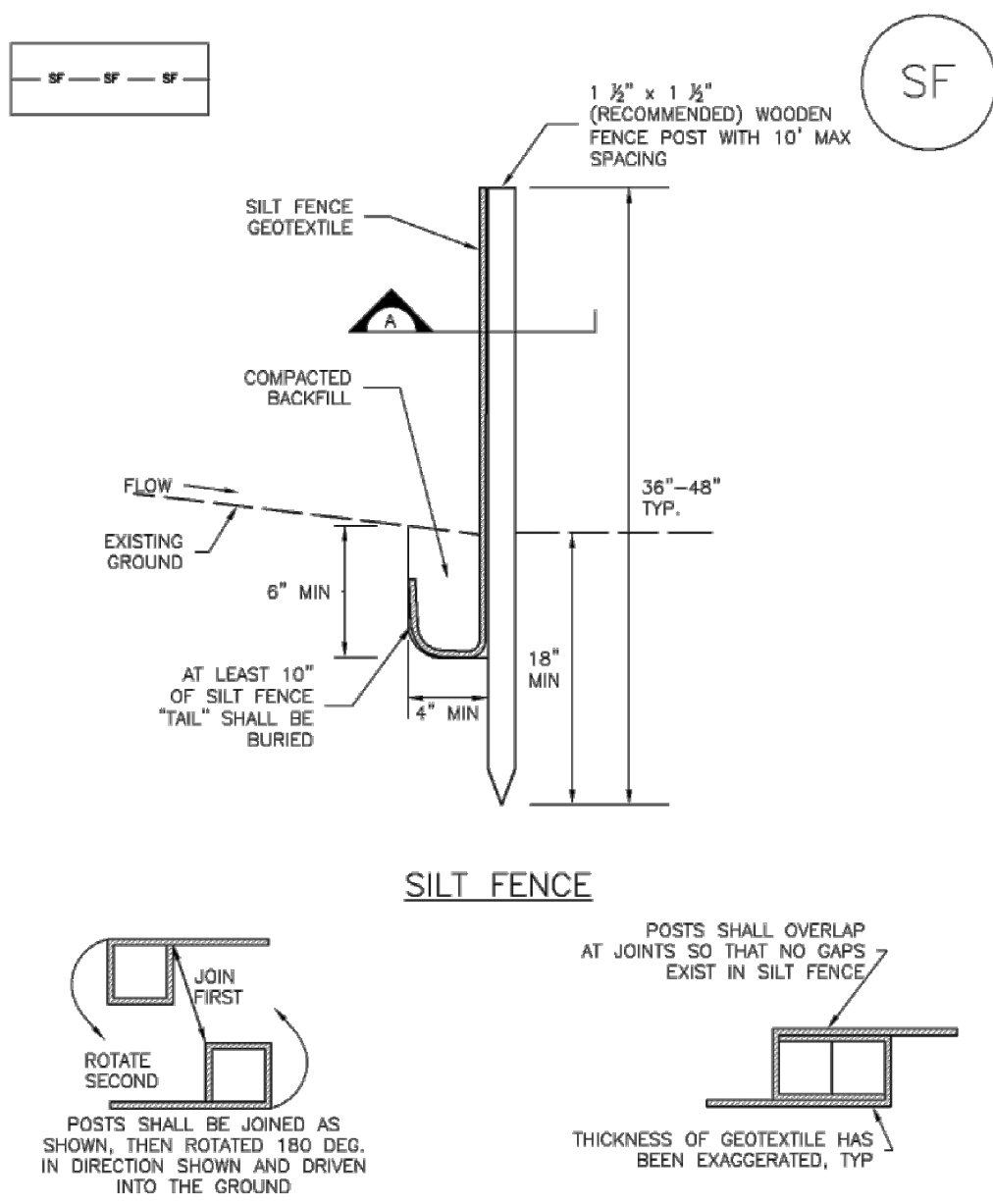
SHEET

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Silt Fence (SF)

SC-1



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. COMPACTON 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.

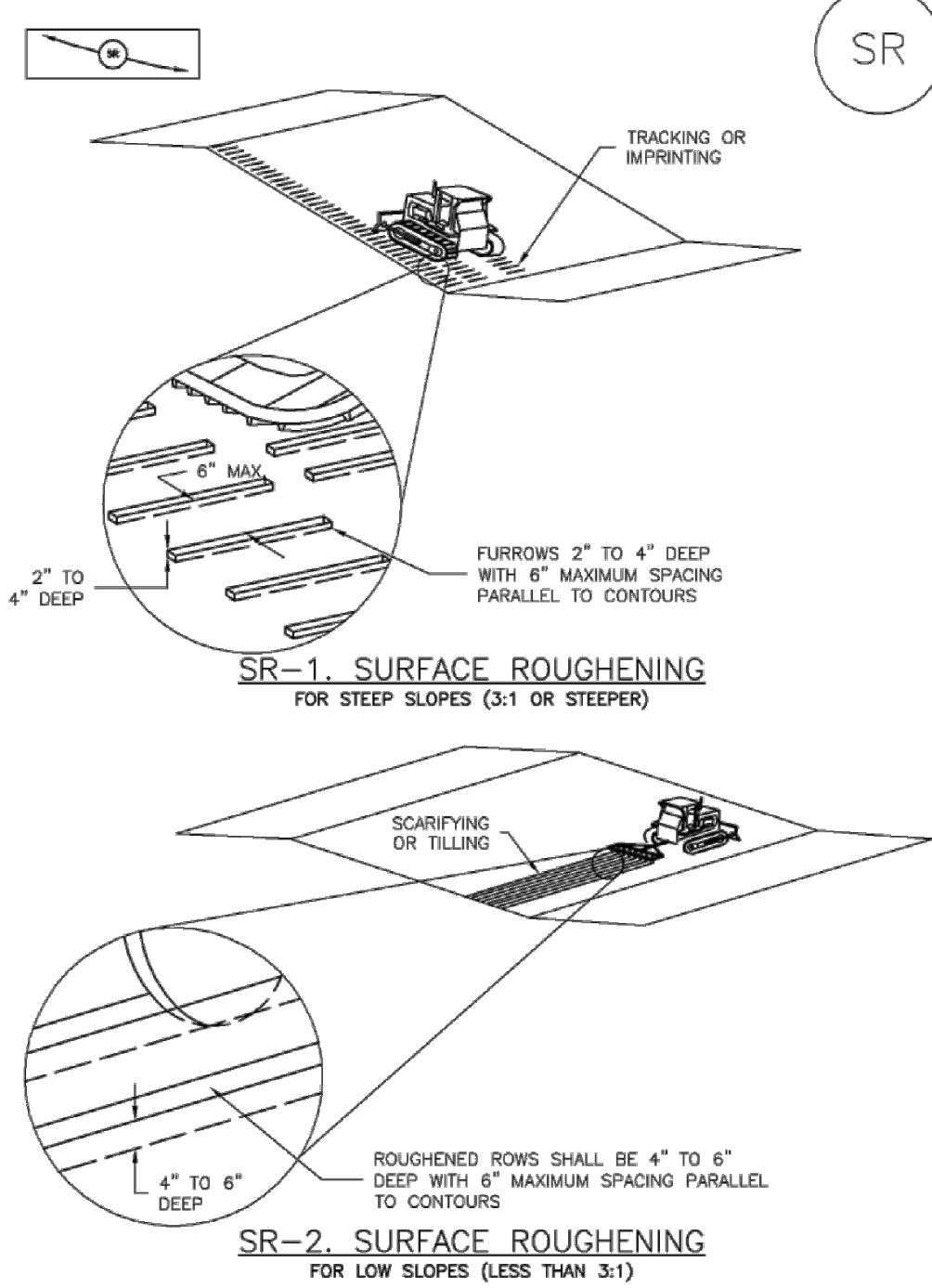
(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

Surface Roughening (SR)

EC-1



SR-1. SURFACE ROUGHENING FOR STEEP SLOPES (3:1 OR STEEPER)

SR-2. SURFACE ROUGHENING FOR LOW SLOPES (LESS THAN 3:1)

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

EC-1

Surface Roughening (SR)

SURFACE ROUGHENING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION(S) OF SURFACE ROUGHENING.
2. SURFACE ROUGHENING SHALL BE PROVIDED PROMPTLY AFTER COMPLETION OF FINISHED GRADING (FOR AREAS NOT RECEIVING TOPSOIL) OR PRIOR TO TOPSOIL PLACEMENT OR ANY FORECASTED RAIN EVENT.
3. AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD WILL BE PLACED WITHOUT DELAY IN THE CONSTRUCTION SEQUENCE, SURFACE ROUGHENING IS NOT REQUIRED.
4. DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.
5. A FARMING DISK SHALL NOT BE USED FOR SURFACE ROUGHENING.

SURFACE ROUGHENING 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 REPLACE UPON DISCOVERY OF THE FAILURE.
4. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
5. IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
6. IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER RILL EROSION.

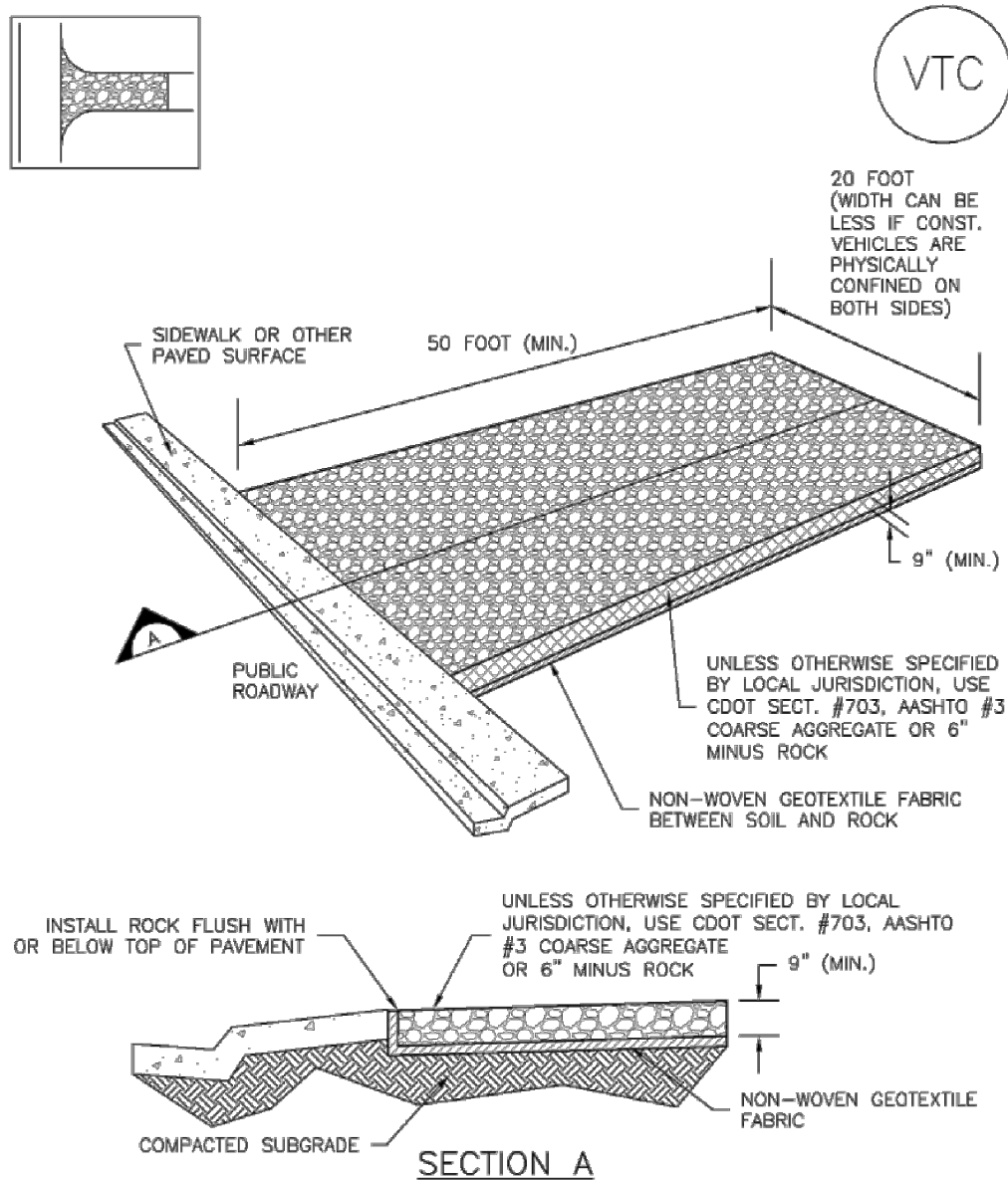
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

Vehicle Tracking Control (VTC)

SM-4



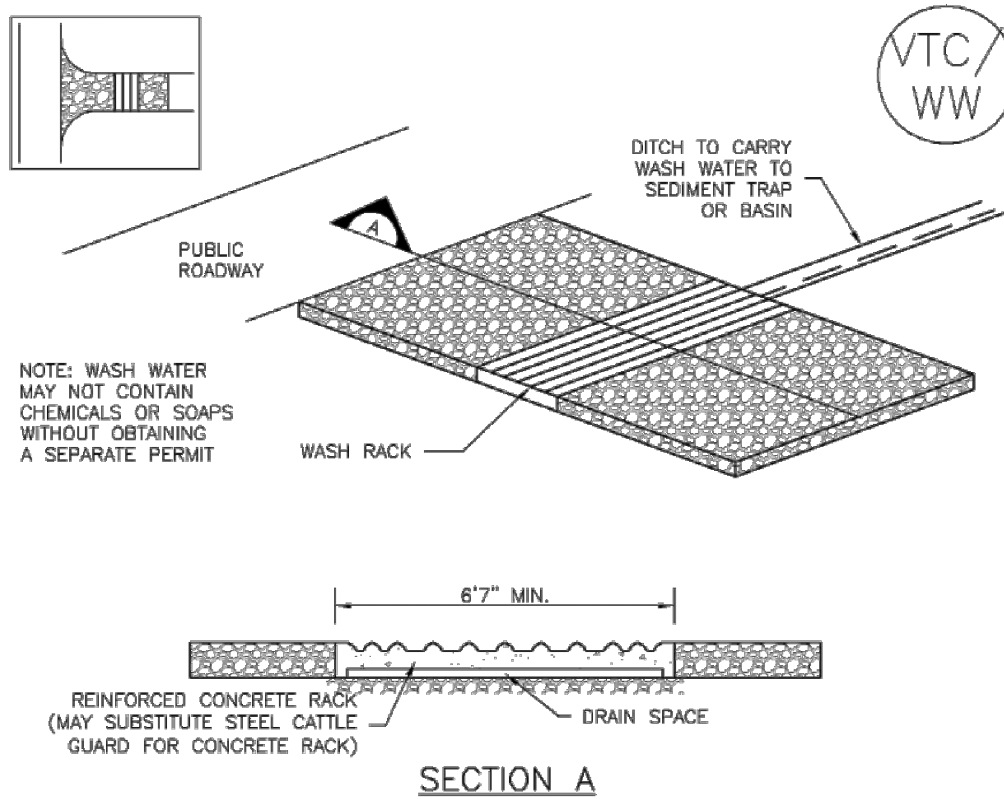
SECTION A

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

SM-4

Vehicle Tracking Control (VTC)



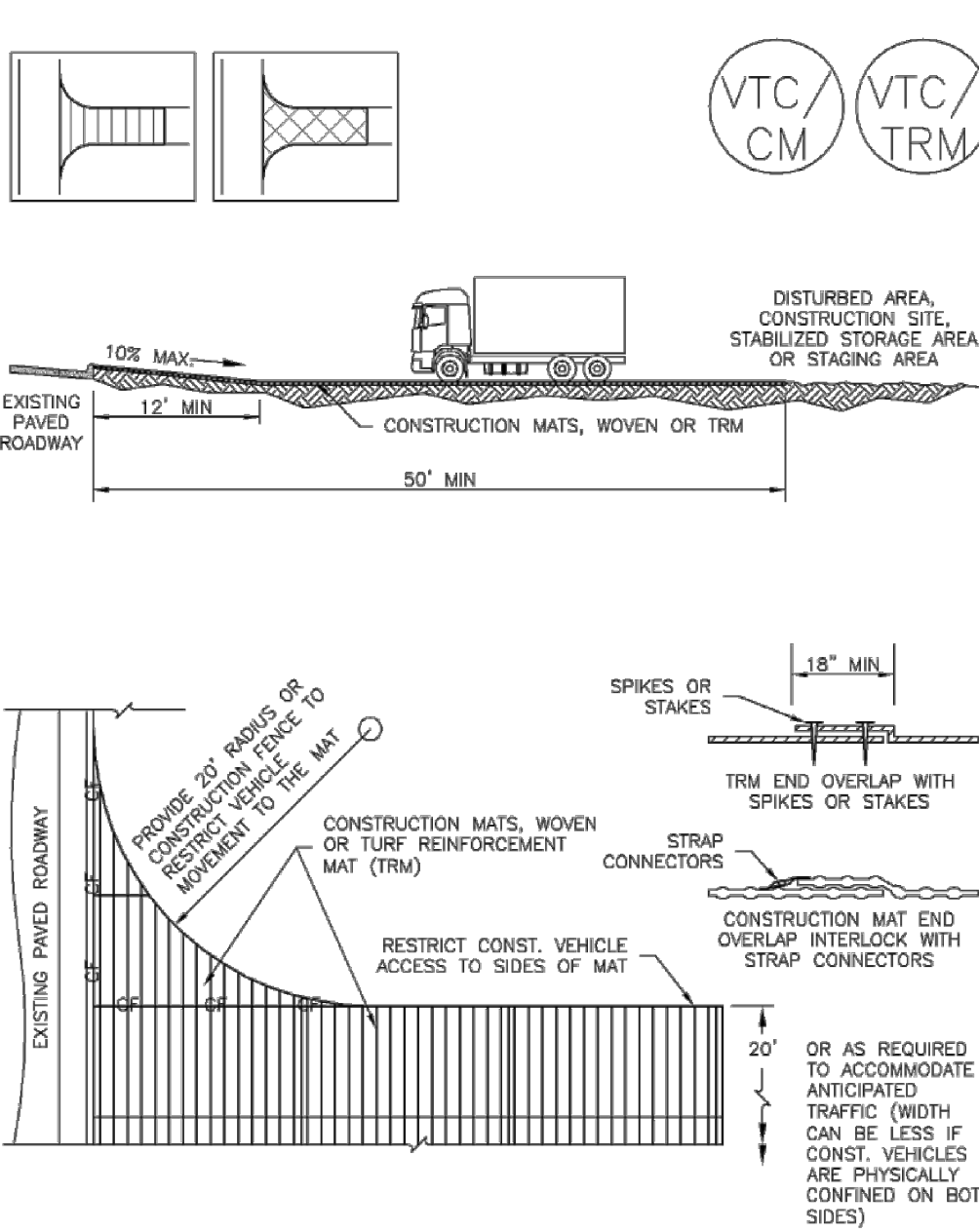
SECTION A

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

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

Vehicle Tracking Control (VTC)

SM-4



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

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

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) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT 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 REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

RAINANCE RESERVOIR #2

CONSTRUCTION DETAILS

TST

TST, INC.
CONSULTING ENGINEERS
748 Whalers Way
Suite 200 Fort Collins
Colorado 80525
Phone: 970.226.0557

JOB NO.
0732.0383.00

SCALE
N/A

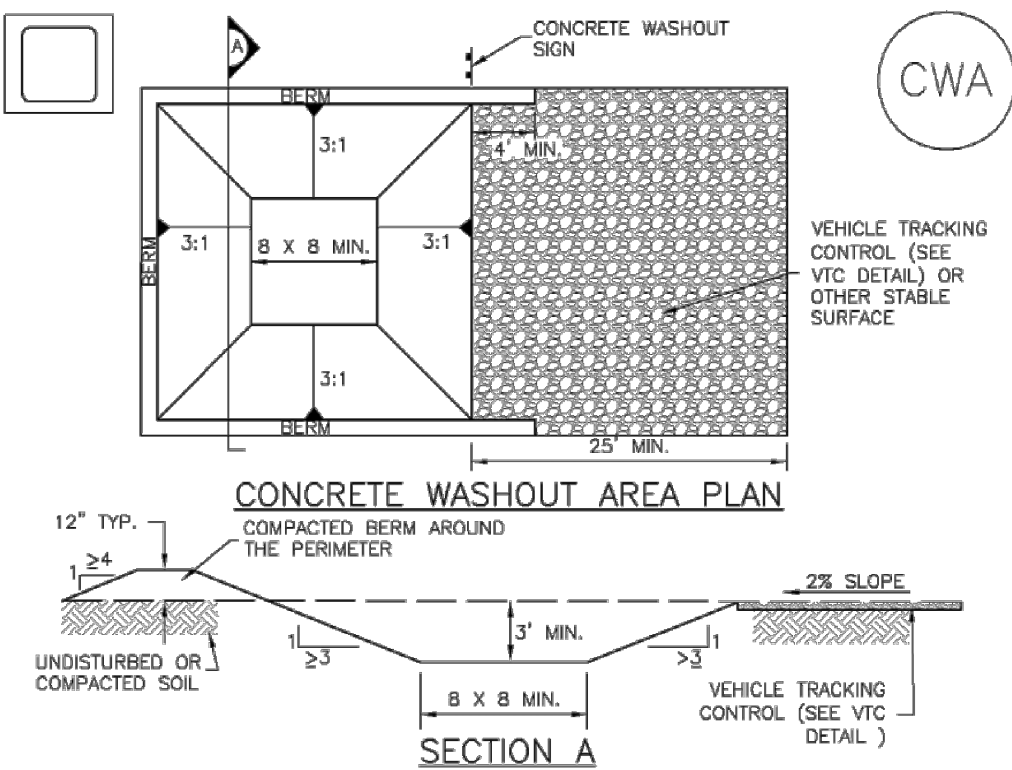
DATE
JANUARY 2021

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7 of 8

Concrete Washout Area (CWA)

MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
- 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 INFASIBLE, 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.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- 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.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- 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.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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CWA-3

MM-1

Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

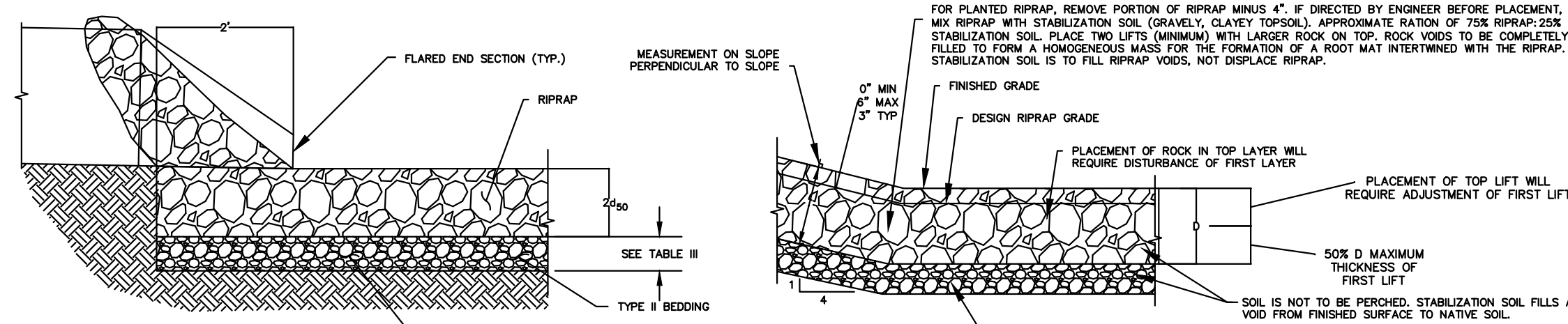
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- 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'.
- 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.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- 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 UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4

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- PLANTED RIPRAP NOTES:
- GENERAL PLACEMENT TECHNIQUES SHOULD RESULT IN LARGER ROCK AT THE SURFACE WITH ROCK SECURELY INTERLOCKED AT THE DESIGN THICKNESS AND GRADE. COMPACTION AND LEVELING SHOULD RESULT IN MINIMAL VIDS AND PROJECTIONS ABOVE GRADE. TYPICAL FOR BOTH BURNED AND EXPOSED RIPRAP.
 - FOR PLANTED RIPRAP: FINAL RIPRAP TO BE COMPACTED BY FULL LOADING OF BACKHOE BUCKET, AS APPROVED. ANY SOFT, YIELDING OR PACKETS OF SMALL ROCK WILL BE REWORKED. PLACE STABILIZATION SOIL SO NO MORE THAN 3 INCHES THICK OVER ROCK AND 25 TO 50 PERCENT OF ROCK EXPOSED AS DIRECTED. COORDINATE ROCK PLACEMENT TO PROVIDE TREE OR SHRUB PLANTING PITS AS INDICATED ON PLANNING PLANS.

TYPICAL PLANTED RIPRAP PLACEMENT

TABLE I CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP			
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSIONS (INCHES)	d_{50} (INCHES)**
TYPE VL	70-100	12	6**
	50-70	9	
	35-50	6	
	2-10	2	
TYPE L	70-100	18	9**
	50-70	12	
	35-50	9	
	2-10	3	
TYPE M	70-100	21	12
	50-70	18	
	35-50	12	
	2-10	4	
TYPE H	70-100	30	18
	50-70	24	
	35-50	18	
	2-10	6	
TYPE VH	70-100	42	24
	50-70	33	
	35-50	24	
	2-10	9	

* d_{50} = MEAN PARTICUL SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.
** 80% VL AND L RIPRAP WITH 20% (BY VOLUME) TOPSOIL AND BURY IT WITH 6+ INCHES OF TOP SOIL, ALL VIBRATION COMPACTED, AND REVEGETATED.

GENERAL NOTES:

- FOR CHANNEL APPLICATIONS REFER TO THE MAJOR DRAINAGE CHAPTER OF THE URBAN STORM DRAINAGE CRITERIA MANUAL, VOLUME 1, FOR RIPRAP SIZING.
- FOR CULVERT/STORM SEWER OUTLET APPLICATIONS REFER TO THE HYDRAULIC STRUCTURES CHAPTER OF THE URBAN STORM DRAINAGE CRITERIA MANUAL, VOLUME 2, FOR RIPRAP SIZE, RIPRAP DEPTH, BASIN LENGTH, AND BASIN WIDTH.

- FILTER FABRIC MAY BE USED IN COMBINATION WITH TYPE II BEDDING AT DROP STRUCTURES AS AN ALTERNATIVE TO A TWO LAYER FILTER.
- FILTER FABRIC SHALL CONFORM TO CDOT SPECIFICATIONS FOR CLASS A DRAINAGE GEOTEXTILES - SECTION 712.

RIPRAP INSTALLATION

NTS

TABLE II GRADATION FOR GRANULAR BEDDING		
U.S. STANDARD SIEVE SIZE	PERCENT WEIGHT BY PASSING SQUARE-MESH SIEVES	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.02 CLASS A
3 INCHES	-----	90-100
1 1/2 INCHES	-----	-----
3/4 INCHES	-----	20-80
3/8 INCHES	100	-----
#4	95-100	0-20
#16	45-80	-----
#50	10-30	-----
#100	2-10	-----
#200	0-2	0-3

TABLE III THICKNESS REQUIREMENTS FOR GRANULAR BEDDING			
U.S. STANDARD SIEVE SIZE	PERCENT WEIGHT BY PASSING SQUARE-MESH SIEVES		
	FINE-GRAINED SOILS*	COURSE-GRAINED SOILS**	
	TYPE I	TYPE II	TYPE II
VL(d_{50} = 6 IN.), L(d_{50} = 9 IN.)	4	4	6
M(d_{50} = 12 IN.)	4	4	6
H(d_{50} = 18 IN.)	4	6	6
VH(d_{50} = 24 IN.)	4	6	6

* MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTE OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE I BEDDING AT DROP STRUCTURES IS ACCEPTABLE.

** FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

RAINANCE RESERVOIR #2

CONSTRUCTION DETAILS

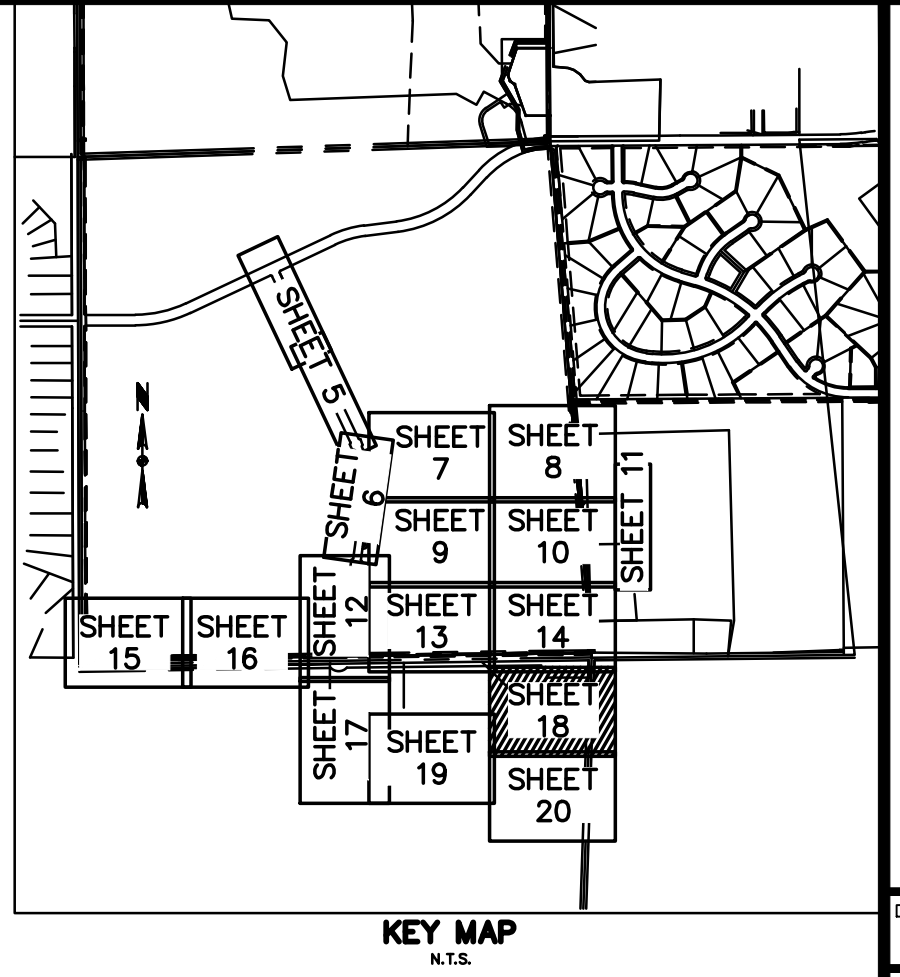
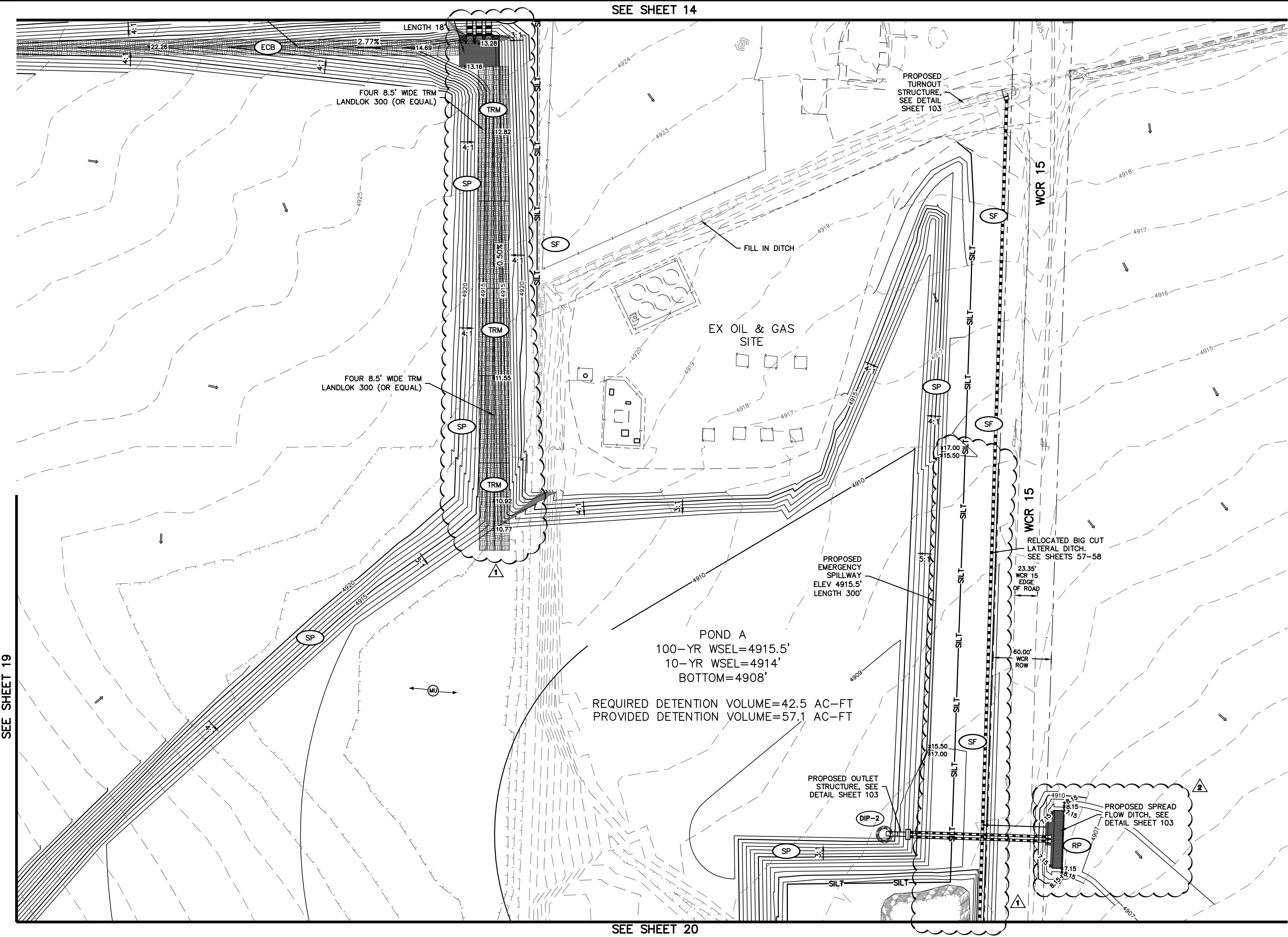
TST

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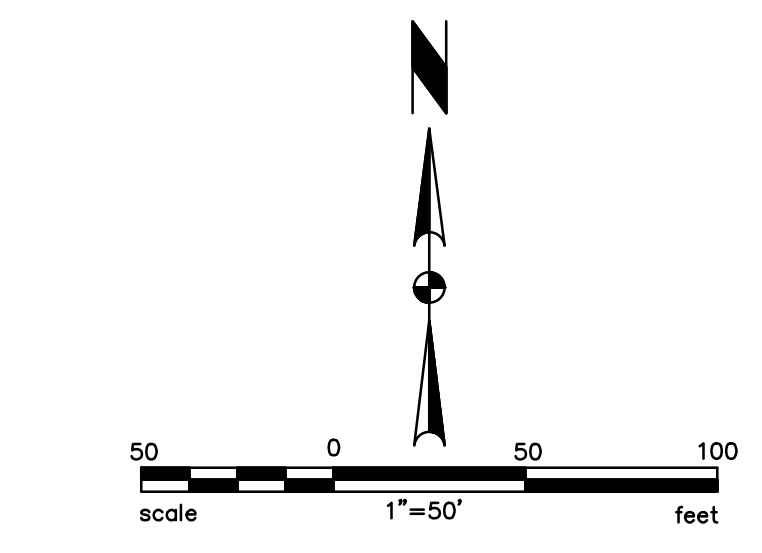
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LEGEND	
EXISTING 5' CONTOUR	5925
EXISTING 1' CONTOUR	5921
EXISTING STORM DRAIN	
PROPOSED 1' CONTOUR	5921
PROPOSED 5' CONTOUR	5925
FLOW ARROW	
FINISHED GRADE ELEVATION	5026.19
PROPOSED STORM LINE	
SILT FENCE	SILT
CURB INLET BLOCK AND GRAVEL FILTER	CIP-1
WATTLE DIKE	WD
DROP INLET PROTECTION	DIP-2
SEEDING AND MULCHING	MU
VEHICLE TRACKING CONTROL PAD	VTC
CONCRETE WASHOUT AREA	CWA
EROSION CONTROL BLANKET/ TURF REINFORCEMENT MAT	ECB / TRM
RIPRAP PAD	RP
CHECK DAM	CD
SEDIMENT BASIN	SDB
SLOPE PROTECTION - CONTRACTOR TO USE "TRACKED" VEHICLE, RUN PERPENDICULAR TO SLOPE TO INHIBIT RILL/GULLEY EROSION, CONTRACTOR MAY USE OTHER WINDROW-TYPE METHODS AS APPROVED BY ENGINEER. TYPICAL ALL SLOPES, REPEAT AS NECESSARY UNTIL LANDSCAPING IS INSTALLED.	SP

NOTES

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TOWN OF WINDSOR
DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH TOWN STANDARDS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DESIGN.

DATE: _____ BY: _____
TOWN ENGINEER

REVISIONS	DESCRIPTION	DATE	BY
1	REVISED SWALE SLOPE, ADDED BERM	10/16/17	DAP
2	ADDED SPOT ELEVATIONS	11/27/17	DAP

W.D.E.

CHECKED: JMJ

DESIGNED: W.D.E.

FILENAME: 0357_Grading

COLORADO LICENSED
JOHN E. MEYERS
44356
PROFESSIONAL ENGINEER

RAINDANCE MAJOR INFRASTRUCTURE

OVERLOT & EROSION CONTROL PLAN

NORRIS DESIGN
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Phone: 970.226.0557

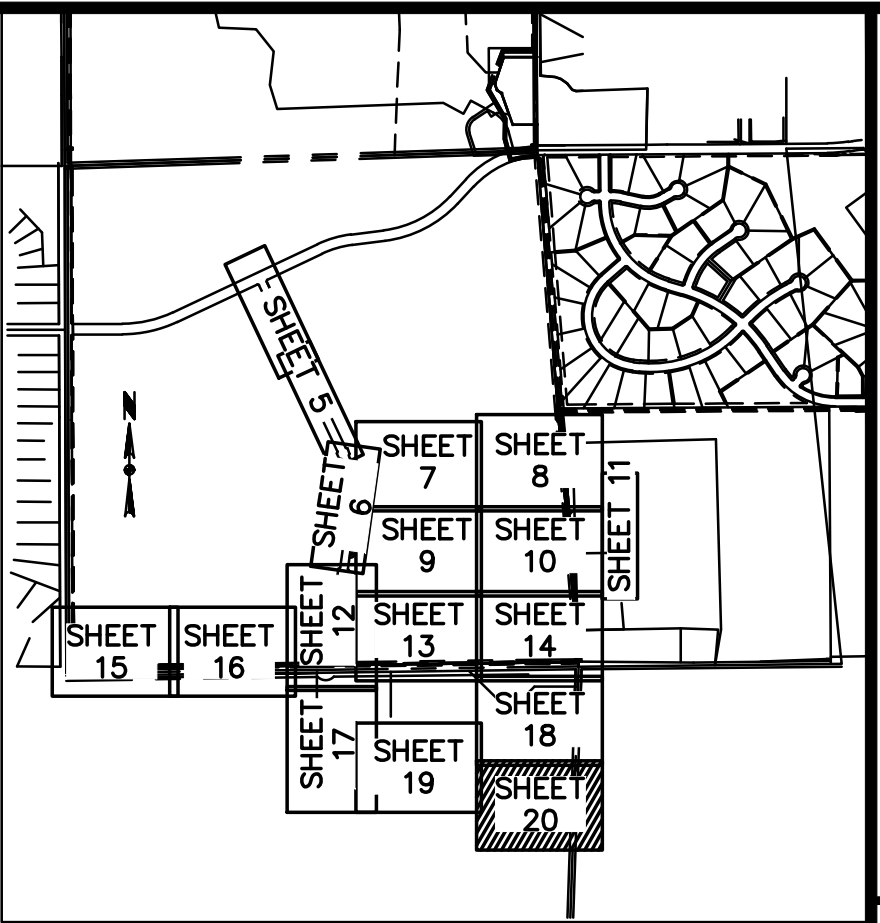
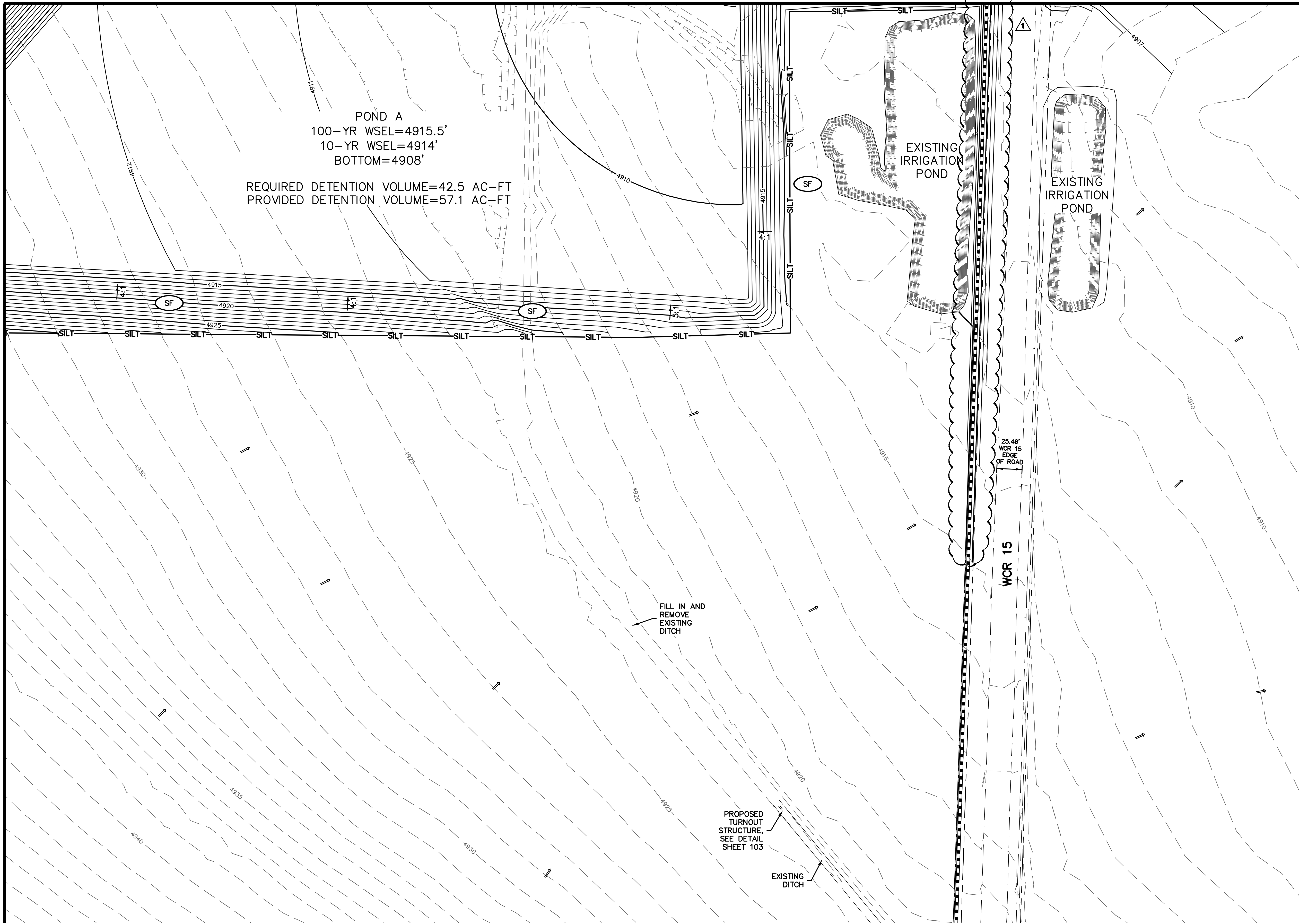
JOB NO. 0732.0357.00

SCALE 1" = 50'

DATE: JUNE 27, 2017

SHEET 18 of 112

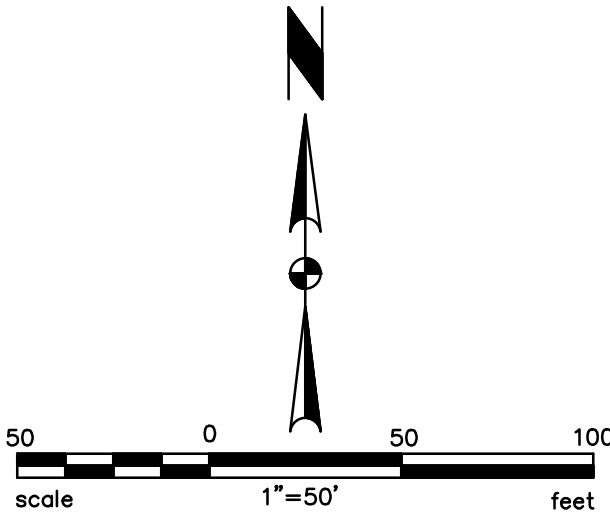
SEE SHEET 18



KEY MAP
N.T.S.

LEGEND

- EXISTING 5' CONTOUR — 5925 —
EXISTING 1' CONTOUR — 5921 —
EXISTING STORM DRAIN —
PROPOSED 1' CONTOUR — 5921 —
PROPOSED 5' CONTOUR — 5925 —
FLOW ARROW —
FINISHED GRADE ELEVATION — 5026.19 —
PROPOSED STORM LINE —
SILT FENCE (SF) — SILT —
CURB INLET BLOCK AND GRAVEL FILTER (CIP-1) —
WATTLE DIKE (WD) —
DROP INLET PROTECTION (DIP-2) —
SEEDING AND MULCHING (MU) —
VEHICLE TRACKING CONTROL PAD (VTC) —
CONCRETE WASHOUT AREA (CWA) —
EROSION CONTROL BLANKET/ TURF REINFORCEMENT MAT (ECB/TRM) —
RIPRAP PAD (RP) —
CHECK DAM (CD) —
SEDIMENT BASIN (SDB) —
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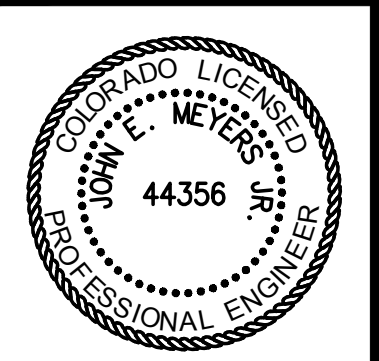
TOWN OF WINDSOR DRAWING REVIEW

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DATE: _____ BY: _____
TOWN ENGINEER

REVISIONS	DESCRIPTION
DATE	ADDED BERM
BY	
DAP	

DRAWN	W.D.E.
CHECKED	JMJ
DESIGNED	W.D.E.
FILENAME	0357_Grading



RAINDANCE MAJOR INFRASTRUCTURE OVERLOT & EROSION CONTROL PLAN

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SHEET	20 of 112

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