



Know what's below.
Call before you dig.

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

LATIGO TRAILS FILING NO. 10

EL PASO COUNTY, COLORADO

GRADING AND EROSION CONTROL PLANS

CONTACTS

OWNER/DEVELOPER: BRJM, LLC
CONTACT: BOB IRWIN
101 N. CASCADE, SUITE 200
COLORADO SPRINGS, CO 80903
(719) 475-7474

CIVIL ENGINEER: DREXEL BARRELL & CO.
CONTACT: TIM D. MCCONNELL, P.E.
101 SAHWATCH STREET, #100
COLORADO SPRINGS, CO 80903
(719) 260-0887

EL PASO COUNTY: PLANNING AND COUNTY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, COLORADO 80910
(719) 520-6819

DEPARTMENT OF PUBLIC WORKS
3257 AKERS DR
COLORADO SPRINGS, CO 80910
(719) 529-6460

DISTRICT: MERIDIAN SERVICE METROPOLITAN DISTRICT
11886 STAPLETON DR
PEYTON, CO 80831
(719) 495-6567

FIRE PROTECTION DISTRICT: FALCON FIRE FPD
7030 N MERIDIAN RD
FALCON, CO 80831
(719) 494-4050

ELECTRIC: MOUNTAIN VIEW ELECTRIC ASSOC., INC.
11140 EAST WOODMEN ROAD
FALCON, COLORADO 80831
(719)495-2283

PREPARED BY:

DREXEL, BARRELL & CO.
Engineers • Surveyors
101 SAHWATCH ST. #100
COLORADO SPGS, COLORADO 80903
CONTACT: TIM D. MCCONNELL, P.E.
(719)260-0887
COLORADO SPRINGS • LAFAYETTE

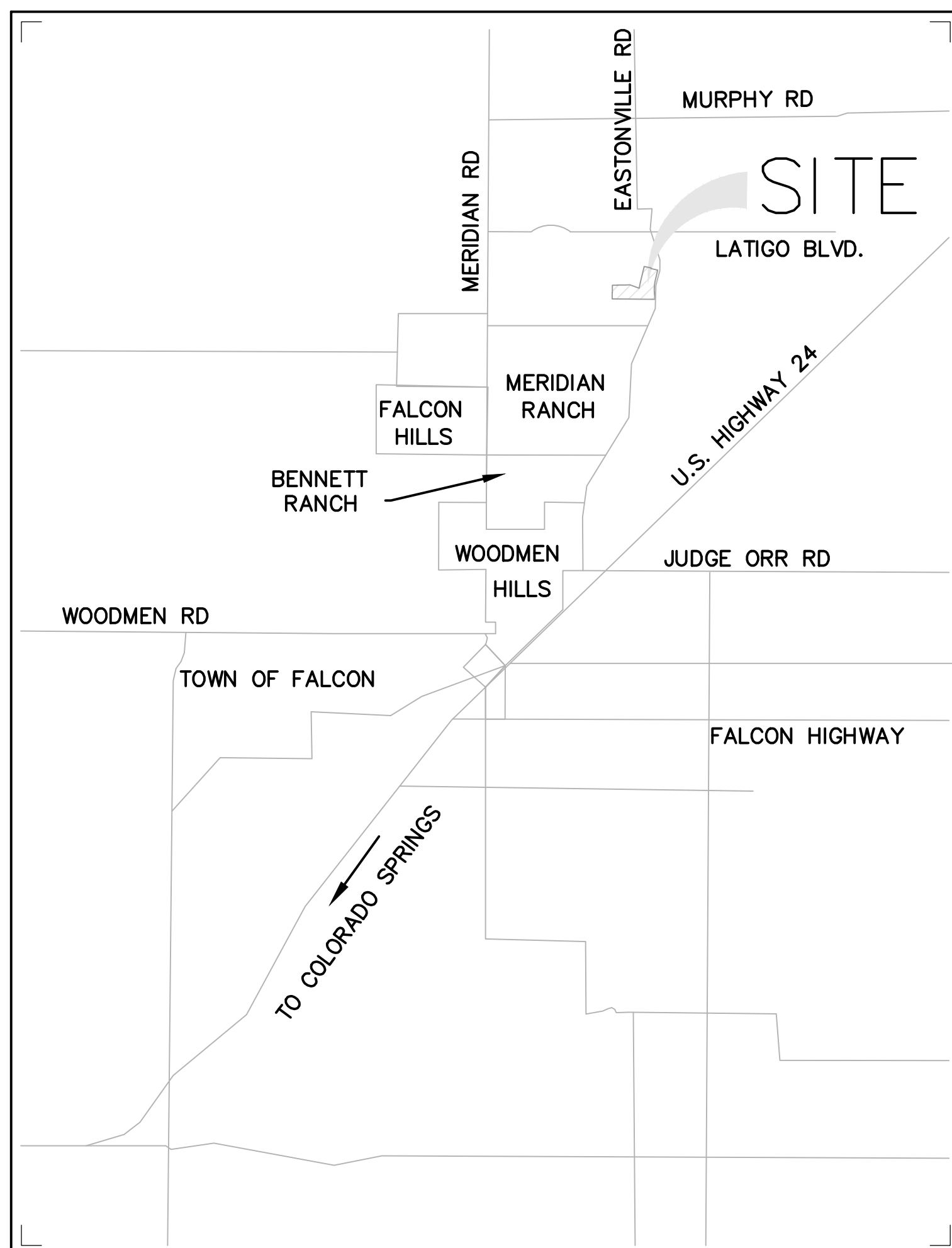
CLIENT:

FALCON LATIGO, LLC
5350 S. ROSLYN ST. STE #400
ENGLEWOOD, CO 80111-2125
(303) 694-0862

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON-SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEO. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFESABLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF-SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS, UNCONTAMINATED GROUNDWATER MAY BE DISCHARGED ON-SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 402, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON-SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INCORPORATED, JANUARY 20, 2021 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT



VICINITY MAP
NOT TO SCALE



SHEET INDEX

1	CV-1	COVER SHEET
2	EC-1	INITIAL EROSION CONTROL PLAN
3	EC-2	INITIAL EROSION CONTROL PLAN
4	EC-3	INITIAL EROSION CONTROL PLAN
5	EC-4	INITIAL EROSION CONTROL PLAN
6	EC-5	INITIAL EROSION CONTROL PLAN
7	DT-1	EROSION CONTROL DETAILS
8	DT-2	EROSION CONTROL DETAILS
9	PD-1	POND G14B DETAILS
10	FB-1	POND G14B FOREBAY DETAILS
11	OUT-1	POND G14B OUTLET STRUCTURE
12	PD-2	POND G18 DETAILS
13	FB-2	POND G18 FOREBAY DETAILS
14	OUT-2	POND G18 OUTLET STRUCTURE
15	PD-3	POND G19 DETAILS
16	FB-3	POND G19 FOREBAY DETAILS
17	OUT-3	POND G19 OUTLET STRUCTURE

OWNER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

ROBERT C. IRWIN _____ DATE _____

DESIGN ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

TIM D. MCCONNELL _____ DATE _____
P.E.# 33797

EL PASO COUNTY

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

JOSHUA PALMER, P.E. _____ DATE _____
COUNTY ENGINEER

GRADING & EROSION CONTROL PLANS FOR:

**LATIGO TRAILS
FILING NO. 10**

EL PASO COUNTY
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24
DESIGNED BY:	SBN
DRAWN BY:	SBN
CHECKED BY:	TDW
FILE NAME:	21820-01CV3

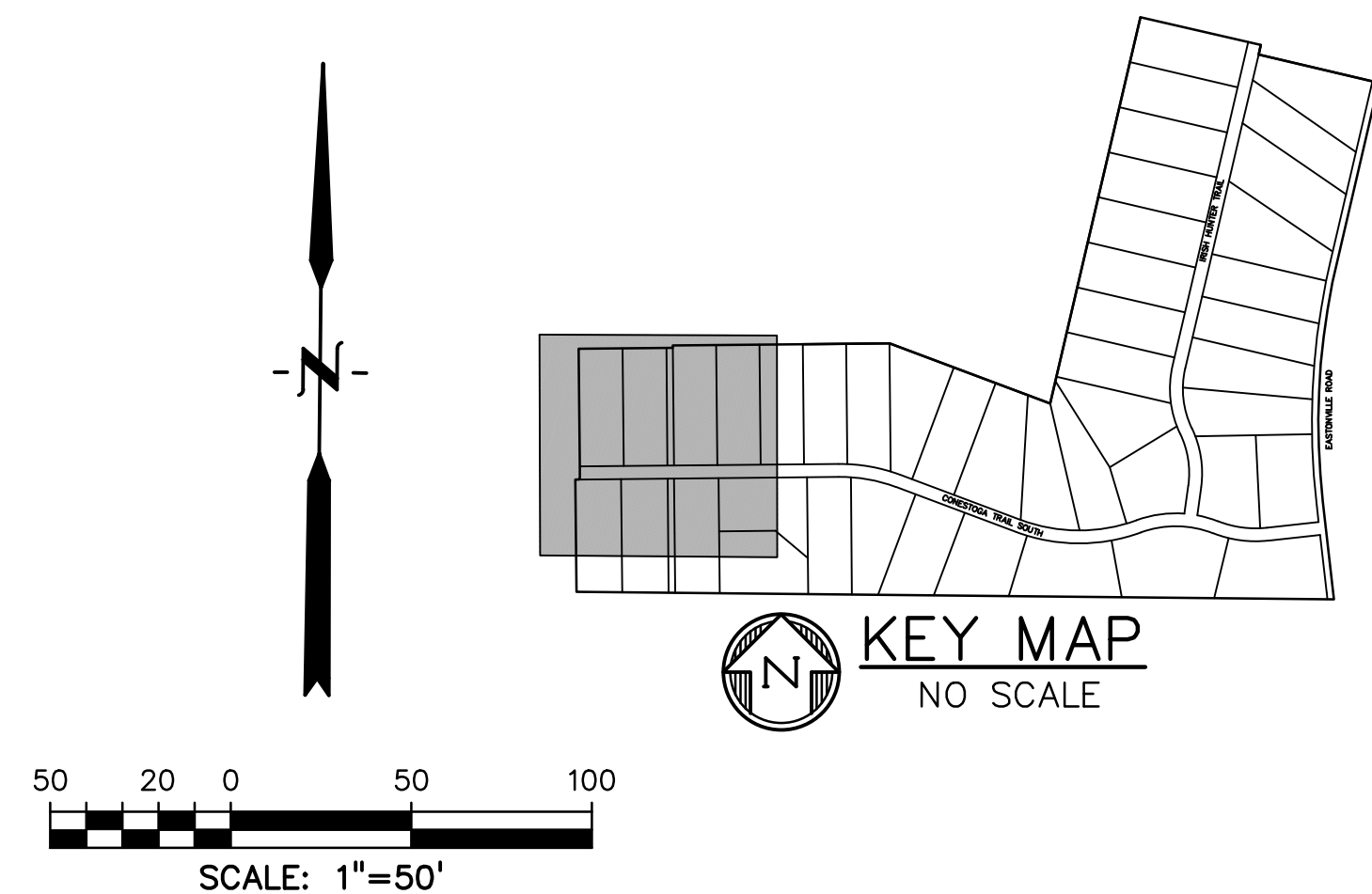
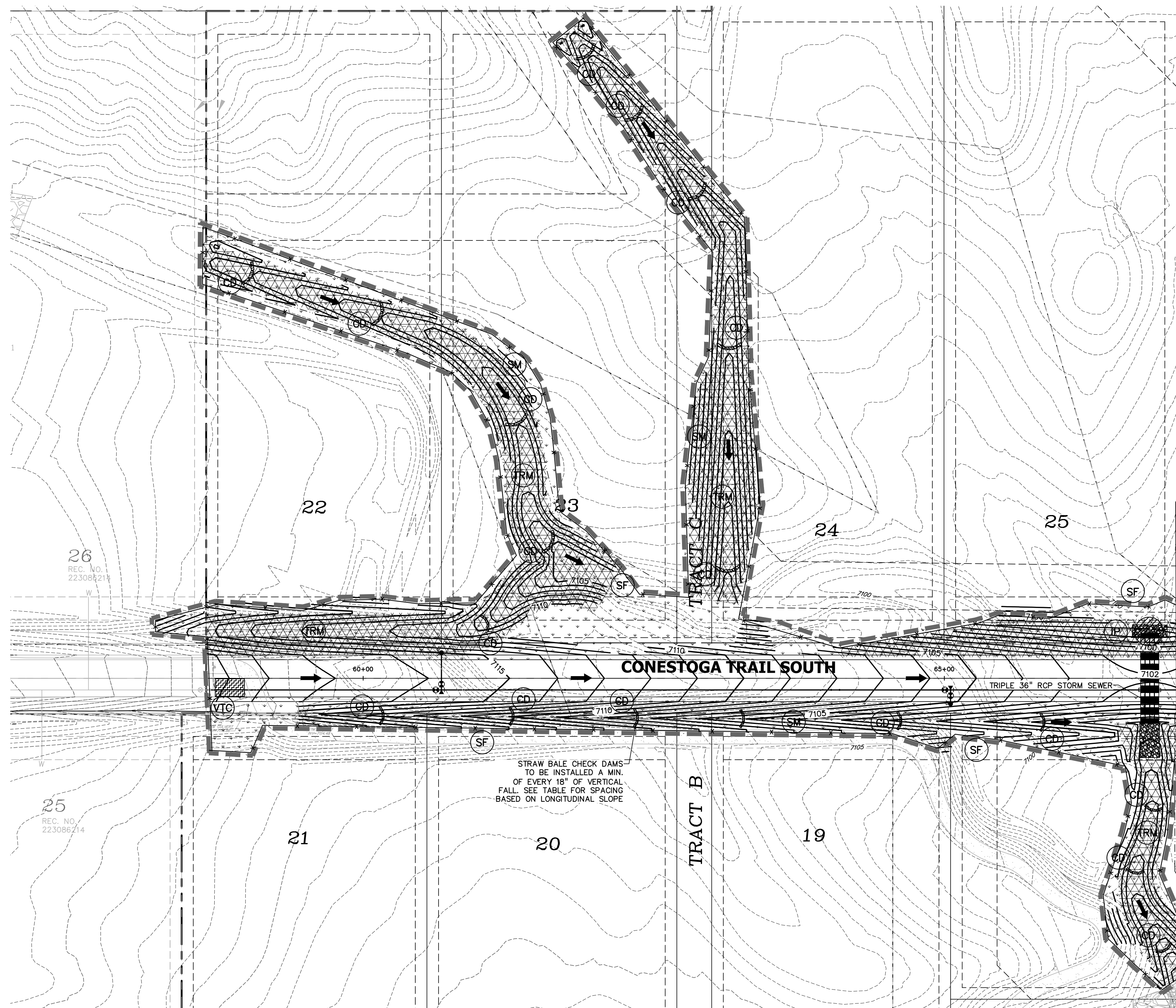
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

COVER SHEET

PROJECT NO. 21820-01CSCV
DRAWING NO.

CV-1



NOTES:

- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
- STABILIZED STAGING AREA AND CONCRETE WASHOUT LOCATION TO BE DETERMINED BY THE CONTRACTOR AND NOTED ON THIS PLAN.
- THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN.
- THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS ARE PROPOSED AS PART OF THIS PROJECT.
- DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
- ALL SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.

BMP PHASING:

- INITIAL/INTERIM**
- INSTALL VTC
 - INSTALL CWA
 - ESTABLISH SSA & STOCKPILE LOCATIONS
 - INSTALL CONSTRUCTION FENCE
 - INSTALL SILT FENCE
 - INSTALL ROUGH CUT STREET CONTROL
 - INSTALL SEDIMENT BASINS
 - INSTALL SWALES
 - INSTALL CHECK DAMS
 - INSTALL INLET/OUTLET PROTECTION
- FINAL**
- INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS.
 - REMOVE ALL TEMPORARY BMPS AFTER FINAL STABILIZATION HAS BEEN REACHED.

LEGEND

- PROPOSED INTERMEDIATE CONTOUR..... 5522
- PROPOSED INDEX CONTOUR..... 5520
- EX INTERMEDIATE CONTOUR..... 5364
- EX INDEX CONTOUR..... 5365
- DIRECTION OF FLOW..... ←
- PROJECT BOUNDARY/PROPERTY LINE..... - - - - -
- ROW..... ————
- LIMITS OF DISTURBANCE/
CONSTRUCTION SITE BOUNDARY..... ————
- CUT/FILL LINE..... ———— CUT ———— FILL ————
- INTERM/FINAL INLET PROTECTION..... IP
- INITIAL/INTERIM SILT FENCE..... SF
- INITIAL/INTERIM CONCRETE WASHOUT AREA..... CWA
- INITIAL/INTERIM VEHICLE TRACKING CONTROL..... VTC
- INITIAL/INTERIM STABILIZED STAGING AREA..... SSA
- INITIAL/INTERIM ROCK SOCKS..... RS
- INITIAL/INTERIM STRAW BALE CHECK DAM..... CD
- INITIAL/INTERIM TEMPORARY SEDIMENT BASIN..... TSB
- FINAL SEEDING AND MULCHING..... SM
- FINAL TURF REINFORCEMENT MAT..... TRM

CHECK DAM SPACING

REFERENCE DETAIL SHEET FOR FURTHER INFORMATION

DITCH SLOPE %	SPACING (FT) (A-B SEE DETAIL)
0.5	300
1.0	150
2.0	75
3.0	50
4.0	37.5
5.0	30
6.0	25

STRAW BALE CHECK DAMS TO BE INSTALLED A MIN. OF EVERY 18" OF VERTICAL FALL. SEE TABLE FOR SPACING BASED ON LONGITUDINAL SLOPE

26
REC. NO.
223088214

25
REC. NO.
223086214

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GRADING & EROSION CONTROL PLANS FOR:
**LATIGO TRAILS
FILING NO. 10**
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FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24

DESIGNED BY: TDM
DRAWN BY: GES
CHECKED BY: TDM
FILE NAME: 21820-01GC1

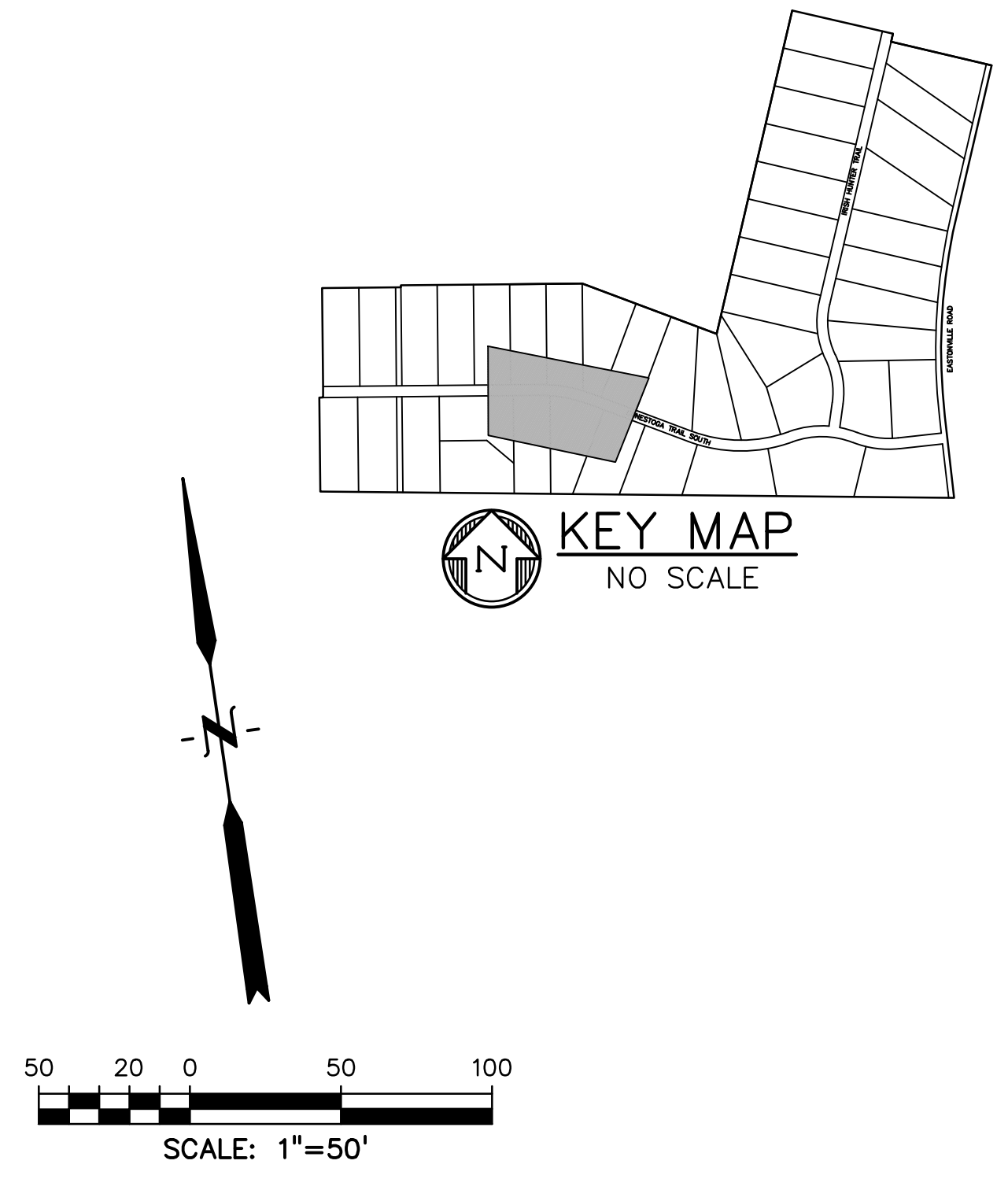
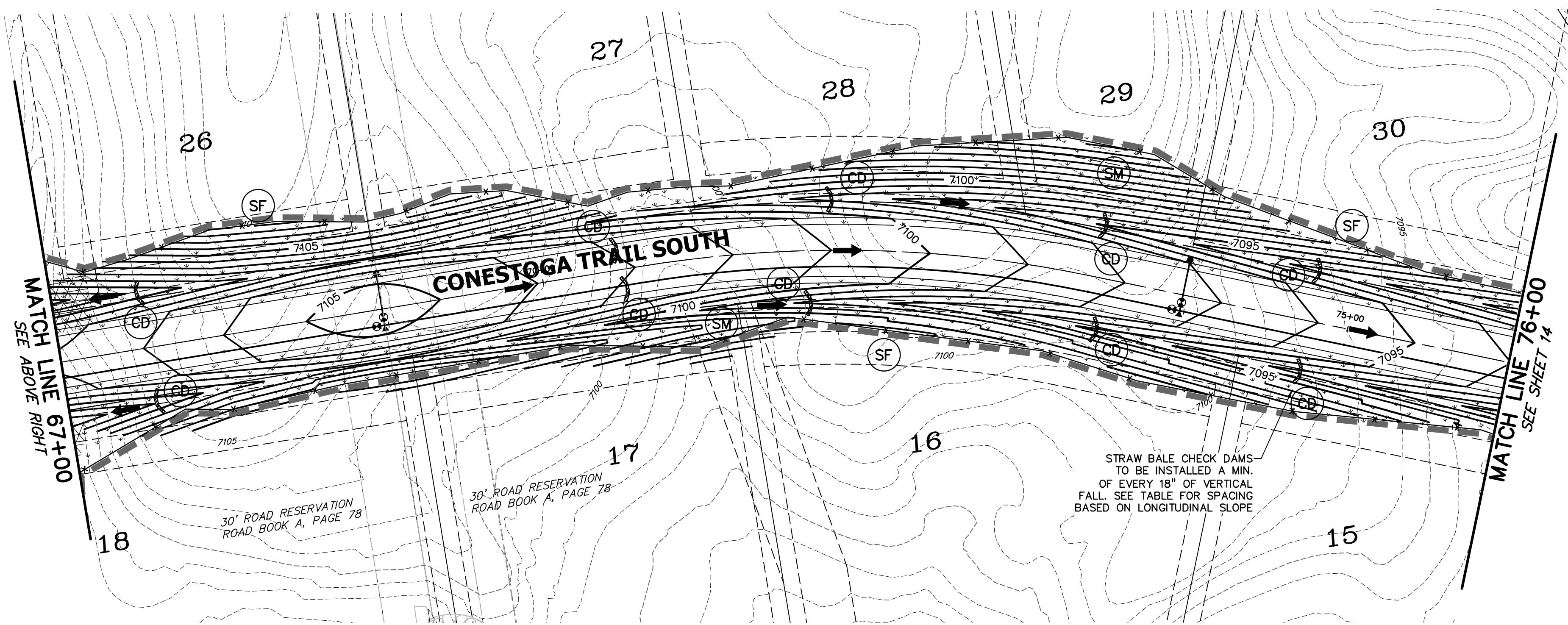
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: N/A

**CONESTOGA TR.
GRADING &
ERSN CNTL PLAN**

PROJECT NO. 21820-01CSCV
DRAWING NO.

EC-1



- NOTES:**
- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
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 - THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN.
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 - DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
 - ALL SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.
- BMP PHASING:**
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- INSTALL VTC
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LEGEND

PROPOSED INTERMEDIATE CONTOUR.....	5522	INITIAL/INTERIM VEHICLE TRACKING CONTROL.....	VTC
PROPOSED INDEX CONTOUR.....	5520	INITIAL/INTERIM STABILIZED STAGING AREA.....	SSA
EX INTERMEDIATE CONTOUR.....	5364	INITIAL/INTERIM ROCK SOCKS.....	RS
EX INDEX CONTOUR.....	5365	INITIAL/INTERIM STRAW BALE CHECK DAM.....	CD
DIRECTION OF FLOW.....	←	INITIAL/INTERIM TEMPORARY SEDIMENT BASIN.....	TSB
PROJECT BOUNDARY/PROPERTY LINE.....	---	FINAL SEEDING AND MULCHING.....	SM
ROW.....	---	FINAL TURF REINFORCEMENT MAT.....	TRM
LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY.....	---		
CUT/FILL LINE.....	CUT FILL		
INTERIM/FINAL INLET PROTECTION.....	IP		
INITIAL/INTERIM SILT FENCE.....	SF		
INITIAL/INTERIM CONCRETE WASHOUT AREA.....	CWA		

CHECK DAM SPACING

REFERENCE DETAIL SHEET FOR FURTHER INFORMATION

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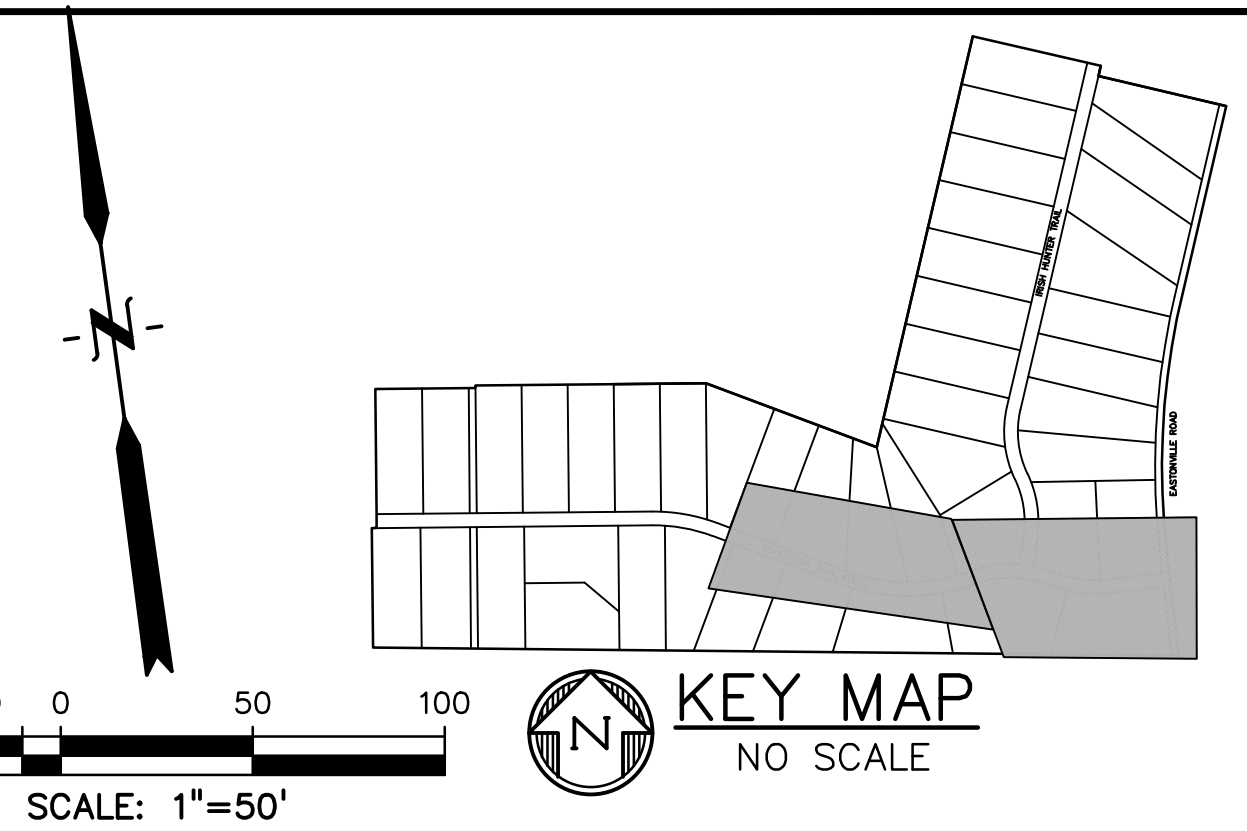
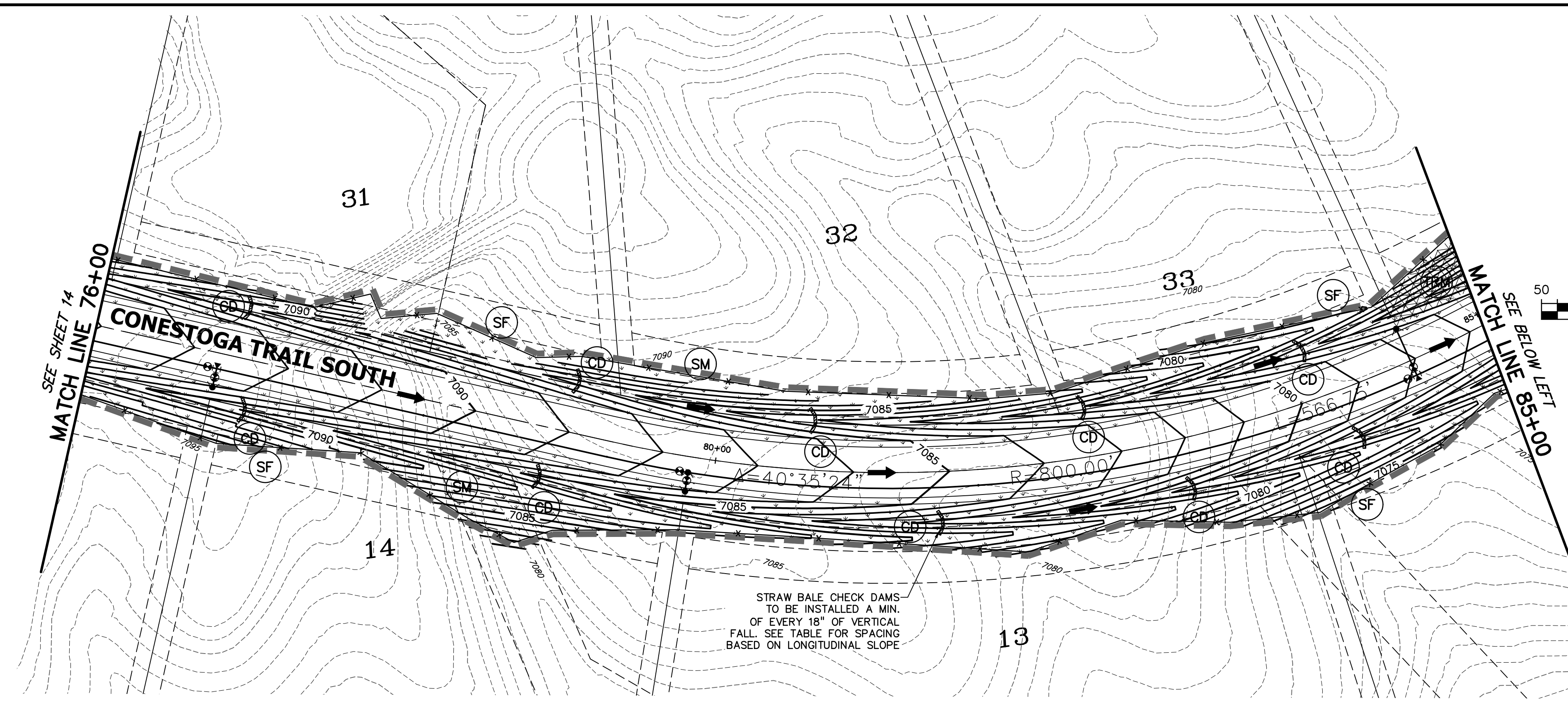
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
 HORIZONTAL: 1" = 50'
 VERTICAL: N/A

**CONESTOGA TR.
 GRADING &
 ERSN CNTL PLAN**

PROJECT NO. 21820-01CSCV
 DRAWING NO.

EC-2



NOTES:

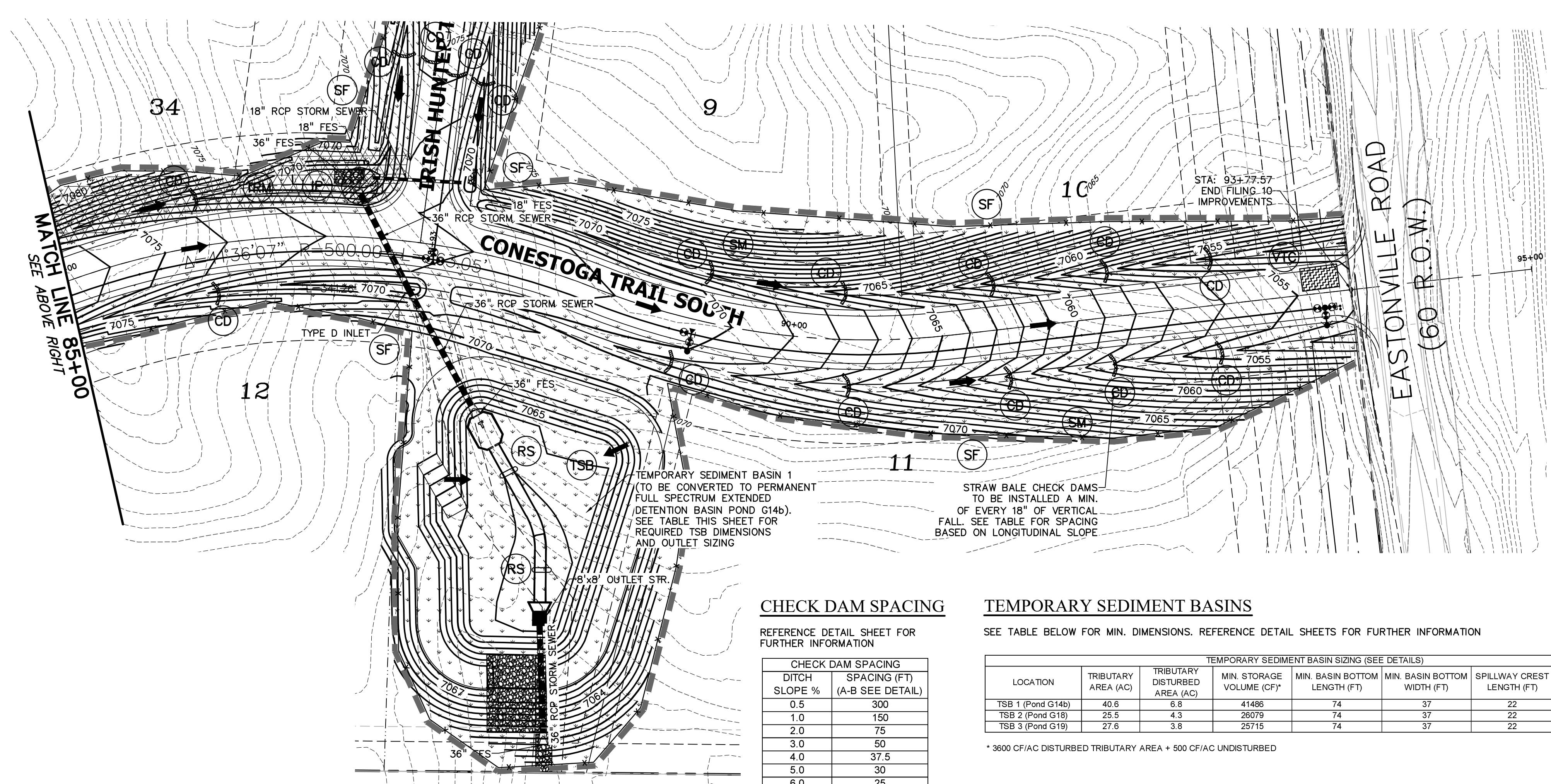
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- INITIAL/INTERIM**
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 - INSTALL CWA
 - ESTABLISH SSA & STOCKPILE LOCATIONS
 - INSTALL CONSTRUCTION FENCE
 - INSTALL SILT FENCE
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 - INSTALL SEDIMENT BASINS
 - INSTALL SWALES
 - INSTALL CHECK DAMS
 - INSTALL INLET/OUTLET PROTECTION
- FINAL**
- INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS.
 - REMOVE ALL TEMPORARY BMPs AFTER FINAL STABILIZATION HAS BEEN REACHED.

LEGEND

PROPOSED INTERMEDIATE CONTOUR.....	5522
PROPOSED INDEX CONTOUR.....	5520
EX INTERMEDIATE CONTOUR.....	5364
EX INDEX CONTOUR.....	5365
DIRECTION OF FLOW.....	←
PROJECT BOUNDARY/PROPERTY LINE.....	---
ROW.....	---
LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY.....	---
CUT/FILL LINE.....	CUT FILL
INTERIM/FINAL INLET PROTECTION.....	IP
INITIAL/INTERIM SILT FENCE.....	SF
INITIAL/INTERIM CONCRETE WASHOUT AREA.....	CWA
INITIAL/INTERIM VEHICLE TRACKING CONTROL.....	VTC
INITIAL/INTERIM STABILIZED STAGING AREA.....	SSA
INITIAL/INTERIM ROCK SOCKS.....	RS
INITIAL/INTERIM STRAW BALE CHECK DAM.....	CD
INITIAL/INTERIM TEMPORARY SEDIMENT BASIN.....	TSB
FINAL SEEDING AND MULCHING.....	SM
FINAL TURF REINFORCEMENT MAT.....	TRM



CHECK DAM SPACING

REFERENCE DETAIL SHEET FOR FURTHER INFORMATION

DITCH SLOPE %	SPACING (FT) (A-B SEE DETAIL)
0.5	300
1.0	150
2.0	75
3.0	50
4.0	37.5
5.0	30
6.0	25

TEMPORARY SEDIMENT BASINS

SEE TABLE BELOW FOR MIN. DIMENSIONS. REFERENCE DETAIL SHEETS FOR FURTHER INFORMATION

TEMPORARY SEDIMENT BASIN SIZING (SEE DETAILS)

LOCATION	TRIBUTARY AREA (AC)	TRIBUTARY DISTURBED AREA (AC)	MIN. STORAGE VOLUME (CF)*	MIN. BASIN BOTTOM LENGTH (FT)	MIN. BASIN BOTTOM WIDTH (FT)	SPILLWAY CREST LENGTH (FT)	HOLE DIAMETER (IN)
TSB 1 (Pond G14b)	40.6	6.8	41486	74	37	22	1-3/16
TSB 2 (Pond G18)	25.5	4.3	26079	74	37	22	1-3/16
TSB 3 (Pond G19)	27.6	3.8	25715	74	37	22	1-3/16

* 3600 CF/AC DISTURBED TRIBUTARY AREA + 500 CF/AC UNDISTURBED

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 5350 S. ROSLYN ST. STE #400
 ENGLEWOOD, CO 80111-2125
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GRADING & EROSION CONTROL PLANS FOR:
LATIGO TRAILS
FILING NO. 10
 EL PASO COUNTY
 FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24

DESIGNED BY: TDM
 DRAWN BY: GES
 CHECKED BY: TDM
 FILE NAME: 21820-01GC1

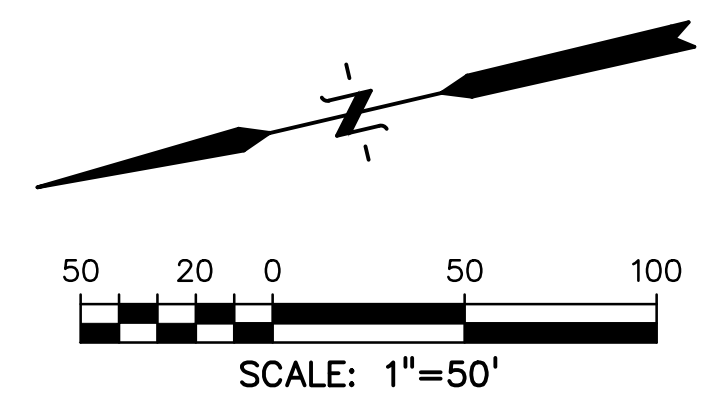
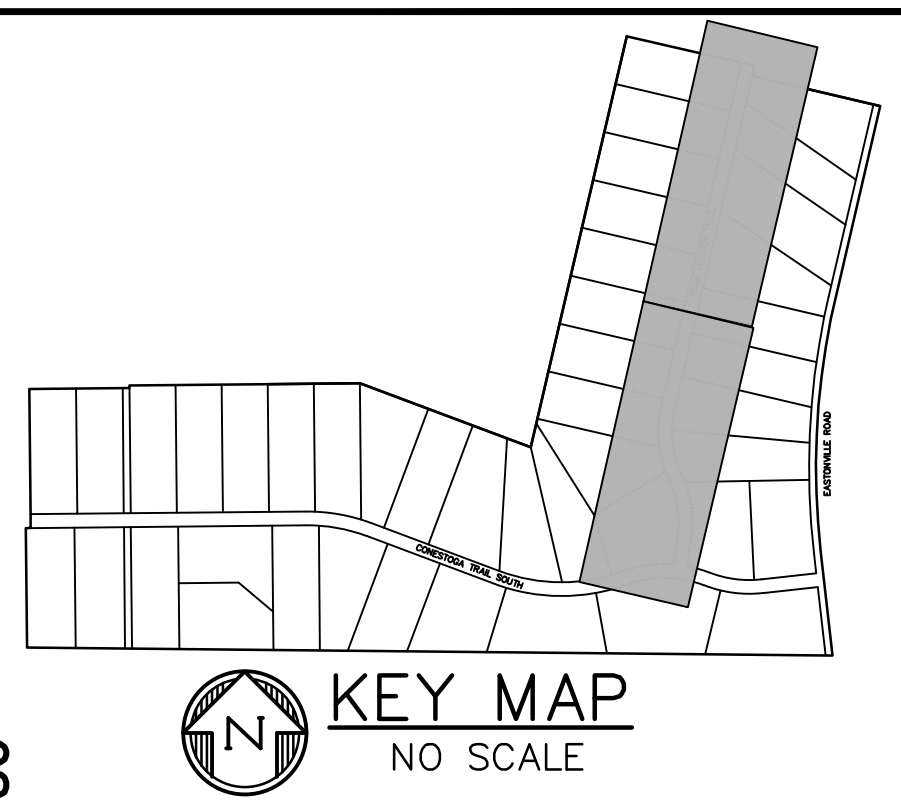
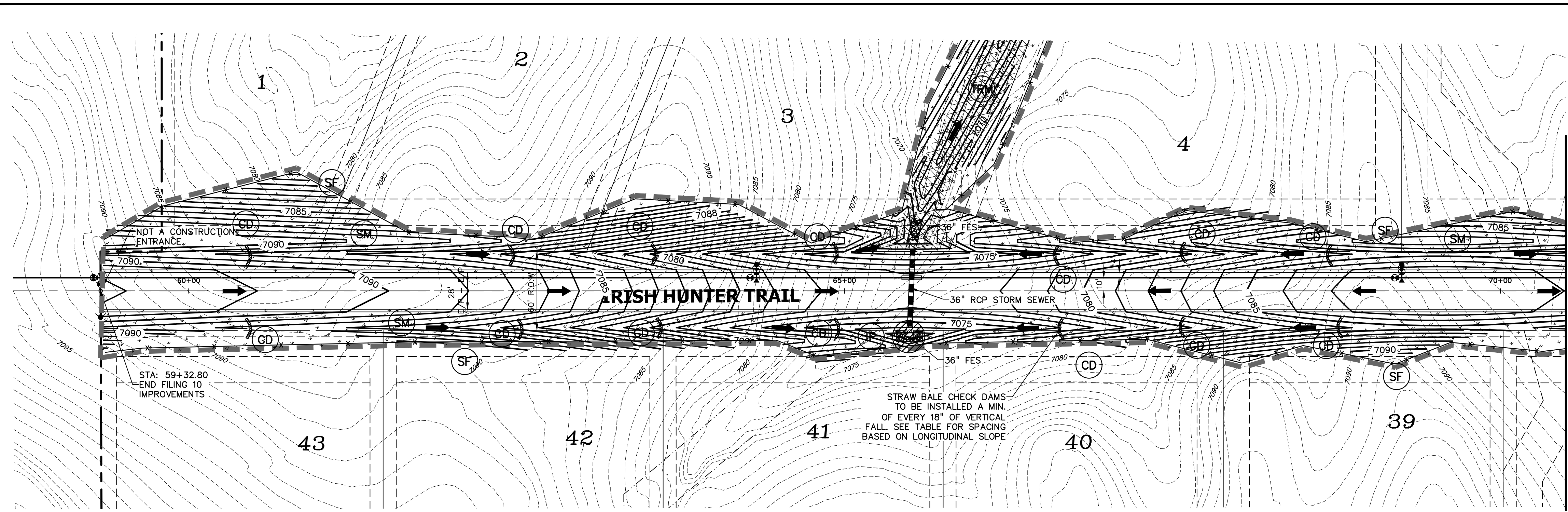
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DRAWING SCALE:
 HORIZONTAL: 1" = 50'
 VERTICAL: N/A

CONESTOGA TR.
GRADING &
ERSN CNTL PLAN

PROJECT NO. 21820-01CSCV
 DRAWING NO.

EC-3



LEGEND

PROPOSED INTERMEDIATE CONTOUR.....	5522
PROPOSED INDEX CONTOUR.....	5520
EX INTERMEDIATE CONTOUR.....	5364
EX INDEX CONTOUR.....	5365
DIRECTION OF FLOW.....	←
PROJECT BOUNDARY/PROPERTY LINE.....	---
ROW.....	---
LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY.....	---
CUT/FILL LINE.....	— CUT — FILL —
INTERIM/FINAL INLET PROTECTION.....	IP
INITIAL/INTERIM SILT FENCE.....	SF
INITIAL/INTERIM CONCRETE WASHOUT AREA.....	CWA

INITIAL/INTERIM VEHICLE TRACKING CONTROL.....	VTC
INITIAL/INTERIM STABILIZED STAGING AREA.....	SSA
INITIAL/INTERIM ROCK SOCKS.....	RS
INITIAL/INTERIM STRAW BALE CHECK DAM.....	CD
INITIAL/INTERIM TEMPORARY SEDIMENT BASIN.....	TSB
FINAL SEEDING AND MULCHING.....	SM
FINAL TURF REINFORCEMENT MAT.....	TRM

NOTES:

- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
- STABILIZED STAGING AREA AND CONCRETE WASHOUT LOCATION TO BE DETERMINED BY THE CONTRACTOR AND NOTED ON THIS PLAN.
- THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN. THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS ARE PROPOSED AS PART OF THIS PROJECT.
- DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
- ALL SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.

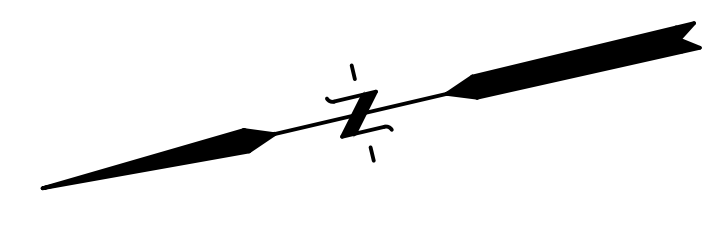
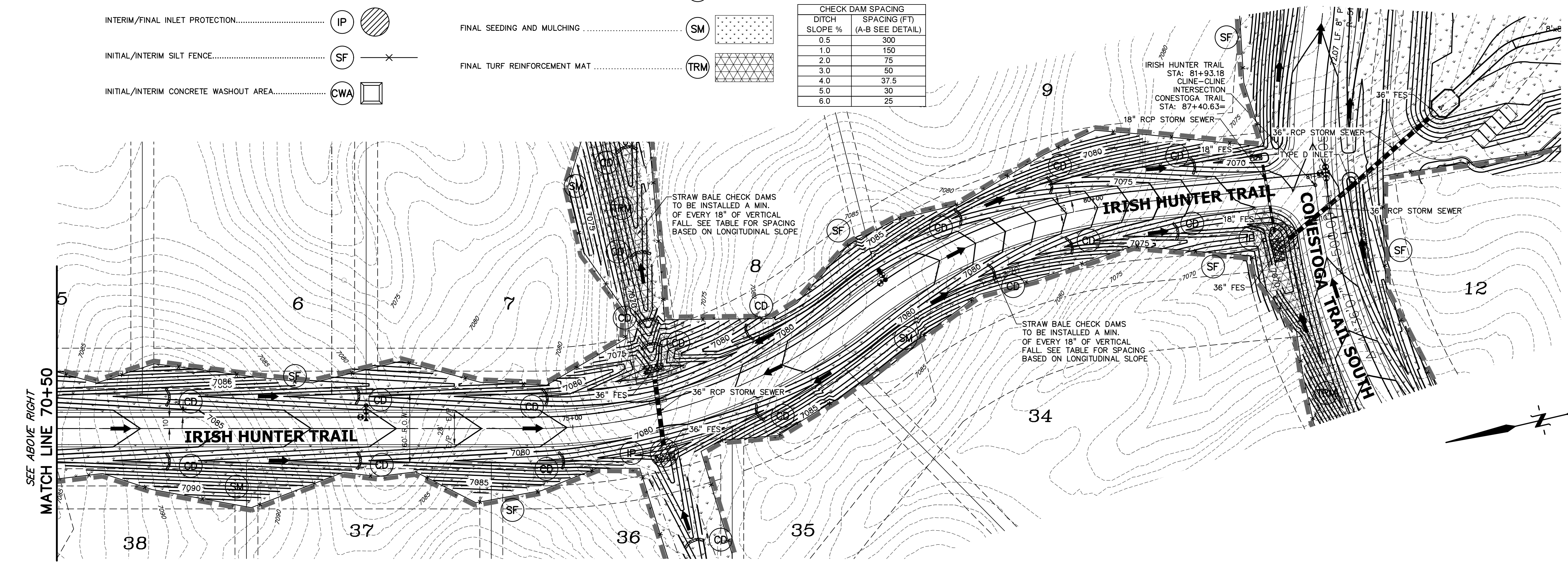
CHECK DAM SPACING

REFERENCE DETAIL SHEET FOR FURTHER INFORMATION

DITCH SLOPE %	SPACING (FT) (A-B SEE DETAIL)
0.5	300
1.0	150
2.0	75
3.0	50
4.0	37.5
5.0	30
6.0	25

BMP PHASING:

- INITIAL/INTERIM**
- INSTALL VTC
 - INSTALL CWA
 - ESTABLISH SSA & STOCKPILE LOCATIONS
 - INSTALL CONSTRUCTION FENCE
 - INSTALL SILT FENCE
 - INSTALL ROUGH CUT STREET CONTROL
 - INSTALL SEDIMENT BASINS
 - INSTALL SWALES
 - INSTALL CHECK DAMS
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ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24

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 DRAWN BY: GES
 CHECKED BY: TDM
 FILE NAME: 21820-01GC2

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DRAWING SCALE:
 HORIZONTAL: 1" = 50'
 VERTICAL: N/A

IRISH HUNTER GRADING & ERSN CNTL PLAN

PROJECT NO. 21820-01CSCV
 DRAWING NO.

EC-4

PREPARED BY:

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DESIGNED BY:	TDM
DRAWN BY:	GES
CHECKED BY:	TDM
FILE NAME:	21820-01GC2

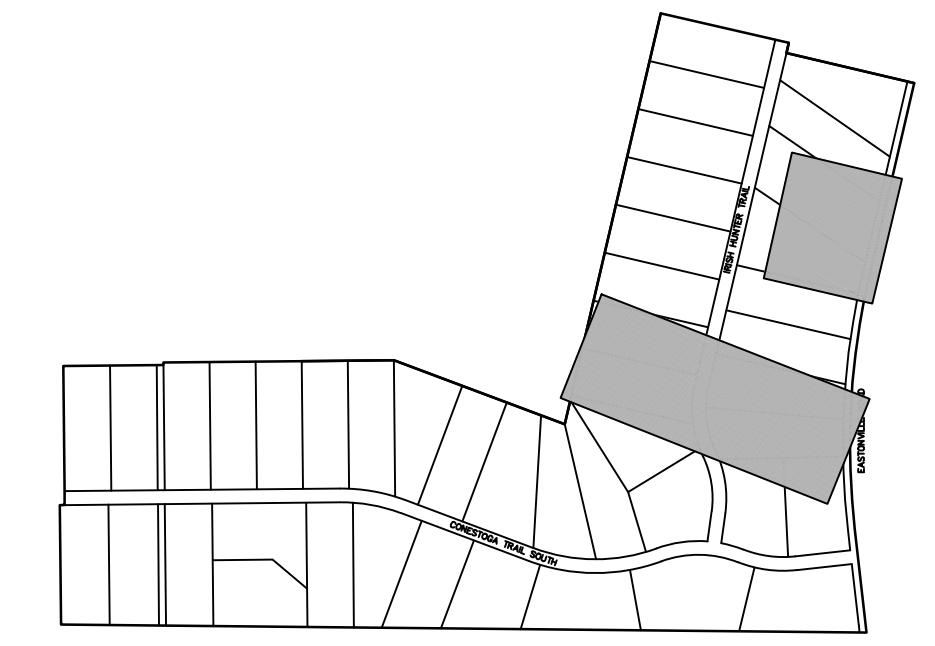
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DRAWING SCALE:
 HORIZONTAL: 1" = 50'
 VERTICAL: N/A

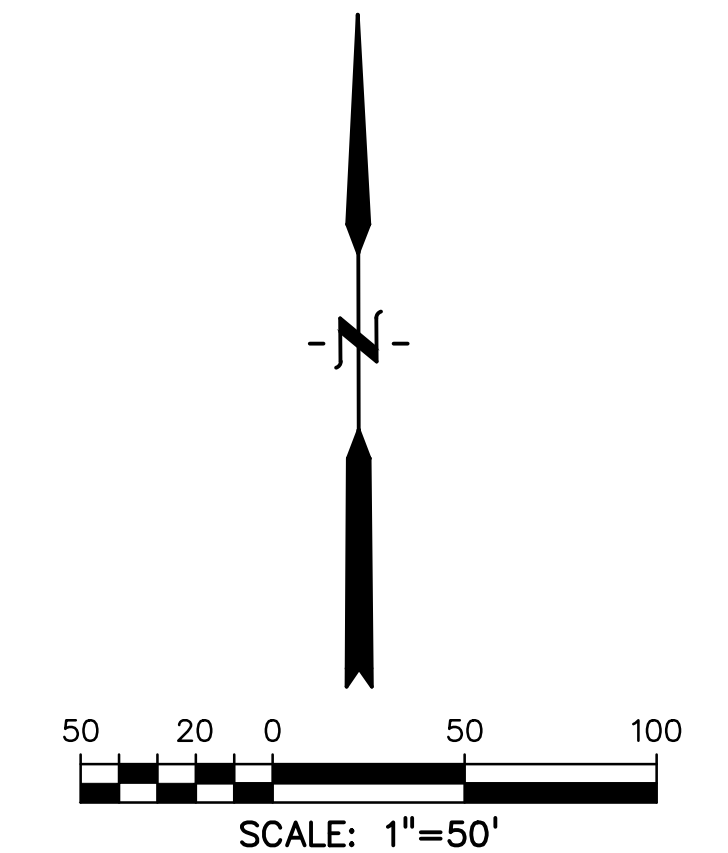
POND G18 & G19 ERN CNTL PLAN

PROJECT NO. 21820-01CSCV
 DRAWING NO.

EC-5



KEY MAP
NO SCALE



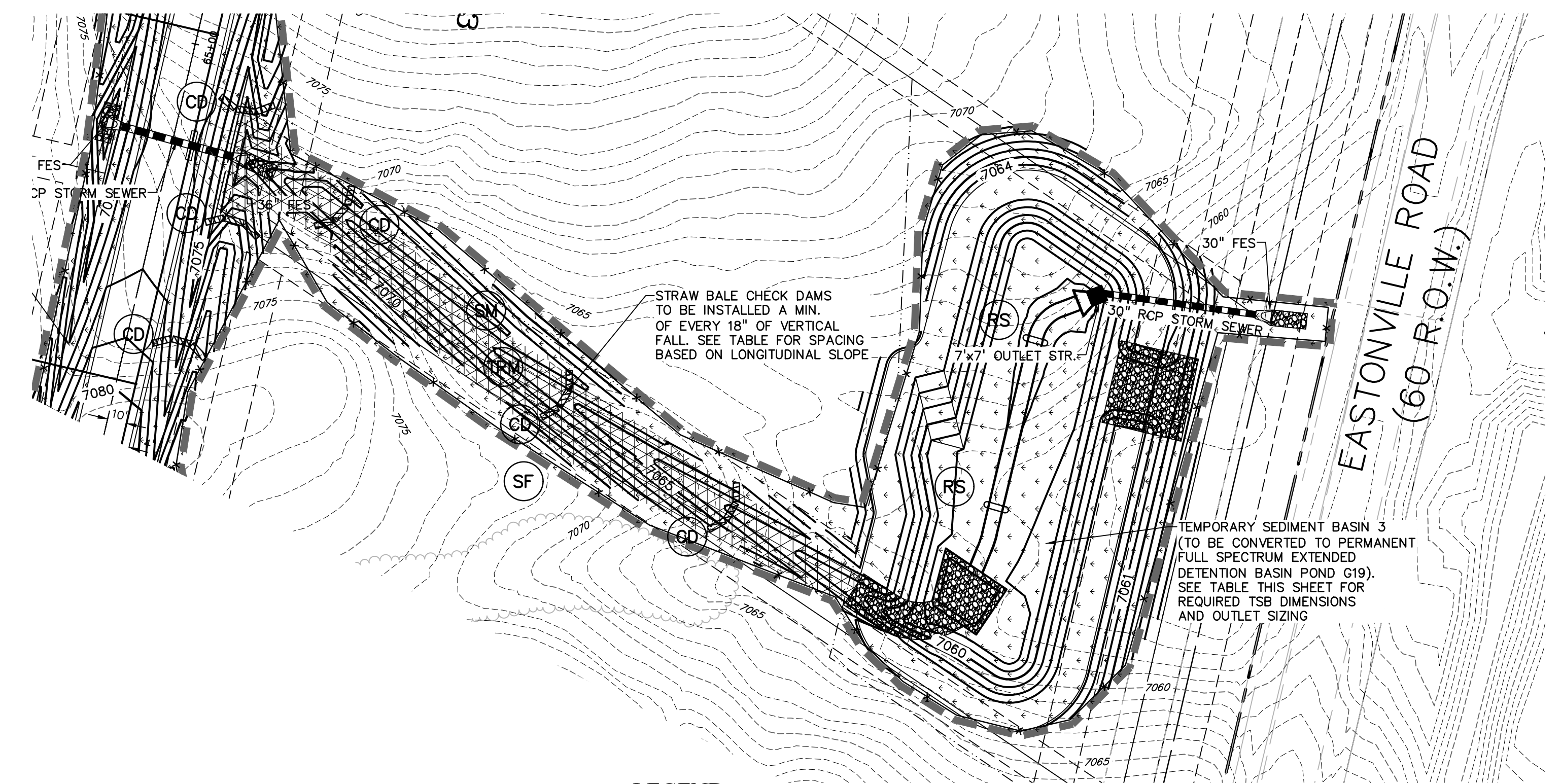
NOTES:

- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
- STABILIZED STAGING AREA AND CONCRETE WASHOUT LOCATION TO BE DETERMINED BY THE CONTRACTOR AND NOTED ON THIS PLAN.
- THE PROJECT SITE IS OUTSIDE OF THE 100-YEAR FLOODPLAIN.
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- DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
- ALL SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.

BMP PHASING:

- INITIAL/INTERIM**
- INSTALL VTC
 - INSTALL CWA
 - ESTABLISH SSA & STOCKPILE LOCATIONS
 - INSTALL CONSTRUCTION FENCE
 - INSTALL SILT FENCE
 - INSTALL ROUGH CUT STREET CONTROL
 - INSTALL SEDIMENT BASINS
 - INSTALL SWALES
 - INSTALL CHECK DAMS
 - INSTALL INLET/OUTLET PROTECTION

- FINAL**
- INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS.
 - REMOVE ALL TEMPORARY BMPs AFTER FINAL STABILIZATION HAS BEEN REACHED.



LEGEND

PROPOSED INTERMEDIATE CONTOUR.....	5522	INITIAL/INTERIM CONCRETE WASHOUT AREA.....	CWA
PROPOSED INDEX CONTOUR.....	5520	INITIAL/INTERIM VEHICLE TRACKING CONTROL.....	VTC
EX INTERMEDIATE CONTOUR.....	5364	INITIAL/INTERIM STABILIZED STAGING AREA.....	SSA
EX INDEX CONTOUR.....	5365	INITIAL/INTERIM ROCK SOCKS.....	RS
DIRECTION OF FLOW.....	←	INITIAL/INTERIM STRAW BALE CHECK DAM.....	CD
PROJECT BOUNDARY/PROPERTY LINE.....	---	INITIAL/INTERIM TEMPORARY SEDIMENT BASIN.....	TSB
ROW.....	---	INITIAL/INTERIM FINAL SEEDING AND MULCHING.....	SM
LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY.....	---	INITIAL/INTERIM TEMPORARY SEDIMENT BASIN.....	TSB
CUT/FILL LINE.....	---	INITIAL/INTERIM FINAL TURF REINFORCEMENT MAT.....	TRM
INTERIM/FINAL INLET PROTECTION.....	IP		
INITIAL/INTERIM SILT FENCE.....	SF		

CHECK DAM SPACING

REFERENCE DETAIL SHEET FOR FURTHER INFORMATION

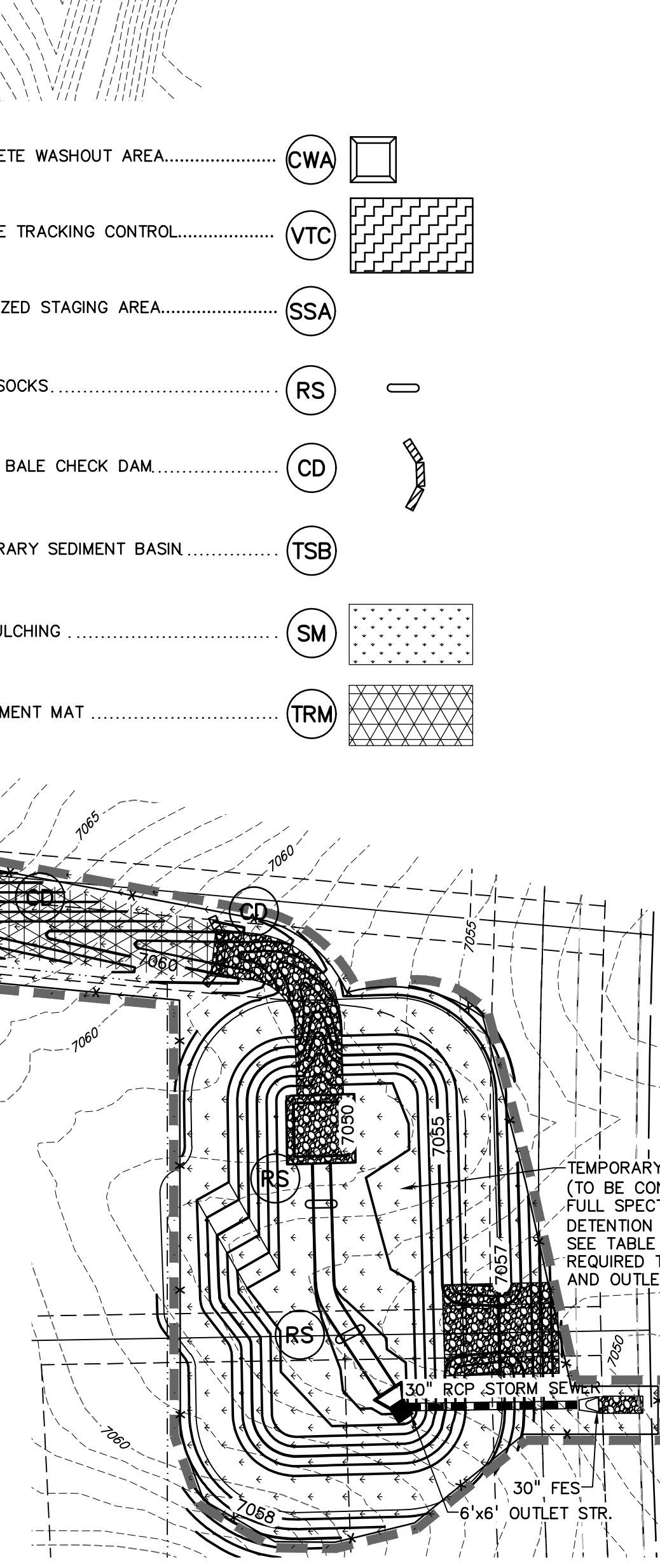
DITCH SLOPE %	SPACING (FT) (A-B SEE DETAIL)
0.5	300
1.0	150
2.0	75
3.0	50
4.0	37.5
5.0	30
6.0	25

TEMPORARY SEDIMENT BASINS

SEE TABLE BELOW FOR MIN. DIMENSIONS. REFERENCE DETAIL SHEETS FOR FURTHER INFORMATION

LOCATION	TRIBUTARY AREA (AC)	TRIBUTARY DISTURBED AREA (AC)	TEMPORARY SEDIMENT BASIN SIZING (SEE DETAILS)				HOLE DIAMETER (IN)
			MIN. STORAGE VOLUME (CF)*	MIN. BASIN BOTTOM LENGTH (FT)	MIN. BASIN BOTTOM WIDTH (FT)	SPILLWAY CREST LENGTH (FT)	
TSB 1 (Pond G14b)	40.6	6.8	41486	74	37	22	1-3/16
TSB 2 (Pond G18)	25.5	4.3	26079	74	37	22	1-3/16
TSB 3 (Pond G19)	27.6	3.8	25715	74	37	22	1-3/16

* 3600 CF/AC DISTURBED TRIBUTARY AREA + 500 CF/AC UNDISTURBED



ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24

DESIGNED BY: KGV
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 FILE NAME: 21820-01DT3

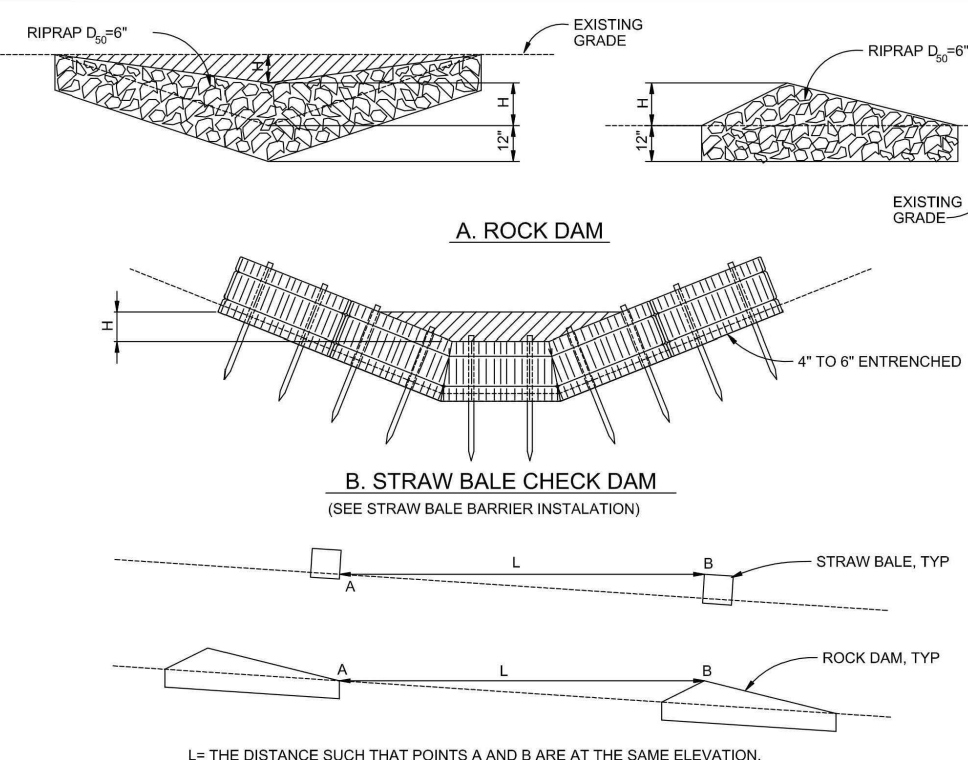
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
 HORIZONTAL: N/A
 VERTICAL: N/A

GRADING & EROSION CONTROL DETAILS

PROJECT NO. 21820-01CSCV
 DRAWING NO.

DT1



A. ROCK DAM
 R/RAP D₅₀ 4"
 EXISTING GRADE
 4" TO 6" ENTRENCHED

B. STRAW BALE CHECK DAM
 (SEE STRAW BALE BARRIER INSTALLATION)
 STRAW BALE TYP
 ROCK DAM TYP

C. SPACING CHECK DAMS
 L= THE DISTANCE SUCH THAT POINTS A AND B ARE AT THE SAME ELEVATION.

CHECK DAM NOTES

INSTALLATION REQUIREMENTS

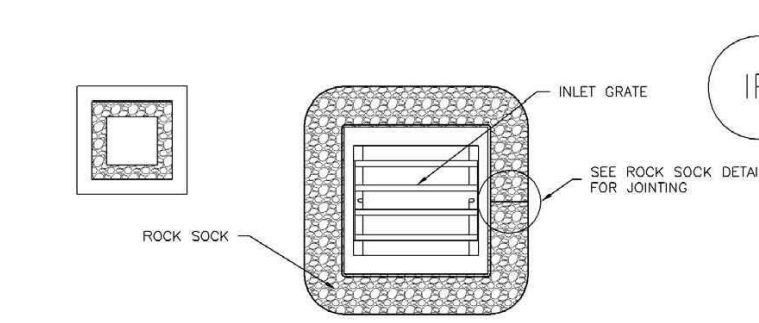
1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SB-4.
2. THE 4" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.
3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 10% OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality Figure CD-1 Check Dam Construction Detail and Maintenance Requirements

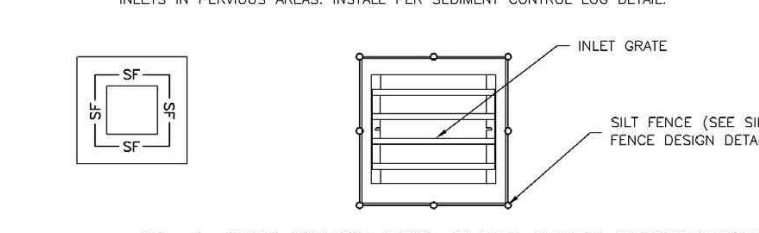
Inlet Protection (IP) SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW MATS/SEDIMENT CONTROL LOSS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



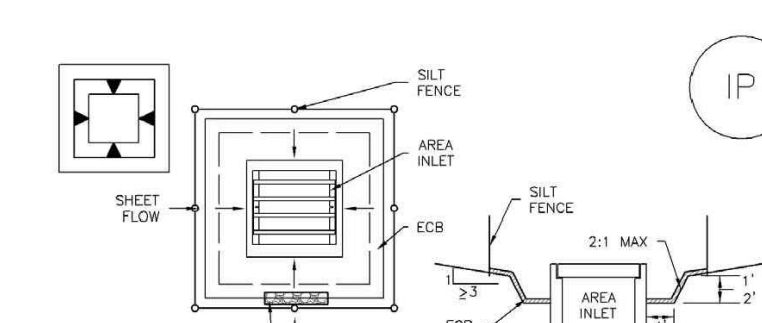
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW MATS/SEDIMENT CONTROL LOSS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-5

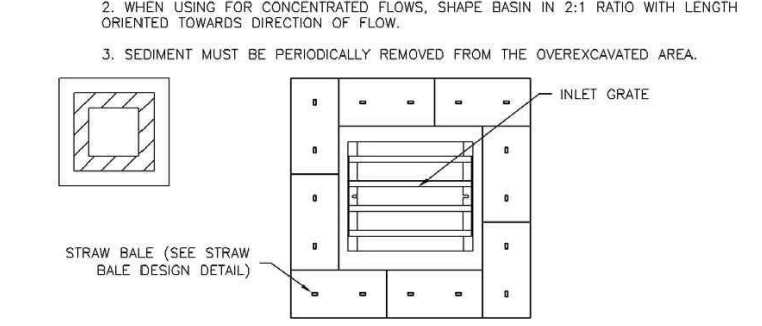
SC-6 Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARD DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



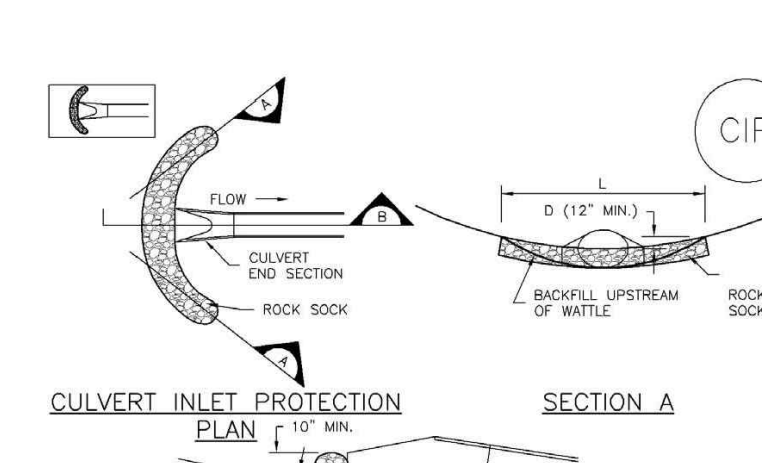
IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES THOROUGHLY ABUTTING ONE ANOTHER.

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Inlet Protection (IP) SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION 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 CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 3/4 THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-7

SC-6 Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF INLET PROTECTION.
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A BARRIAGE/STORM EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM USFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION 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 INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED. WHEN THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDS, AND MULCH, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-8

Sediment Basin (SB) SC-7

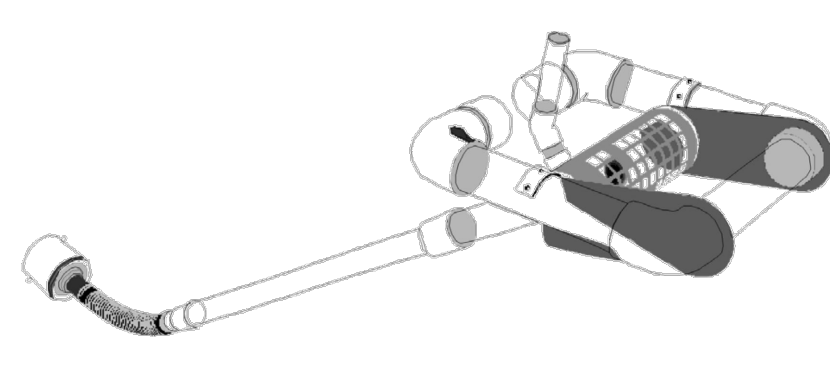


Illustration SB-1. Outlet structure for a temporary sediment basin - Faircloth Skimmer Floating Outlet. Illustration courtesy of J. W. Faircloth & Sons, Inc., FairclothSkimmer.com.

Outlet Protection and Spillway: Consider all flow paths for runoff leaving the basin, including protection at the typical point of discharge as well as overtopping.

- Outlet Protection:** Outlet protection should be provided where the velocity of flow will exceed the maximum permissible velocity of the material of the waterway into which discharge occurs. This may require the use of a riprap apron at the outlet location and/or other measures to keep the waterway from eroding.
- Emergency Spillway:** Provide a stabilized emergency overflow spillway for rainstorms that exceed the capacity of the sediment basin volume and its outlet. Protect basin embankments from erosion and overtopping. If the sediment basin will be converted to a permanent detention basin, design and construct the emergency spillway(s) as required for the permanent facility. If the sediment basin will not become a permanent detention basin, it may be possible to substitute a heavy polyvinyl membrane or properly bedded rock cover to line the spillway and downstream embankment, depending on the height, slope, and width of the embankments.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-3

SC-7 Sediment Basin (SB)

Maintenance and Removal

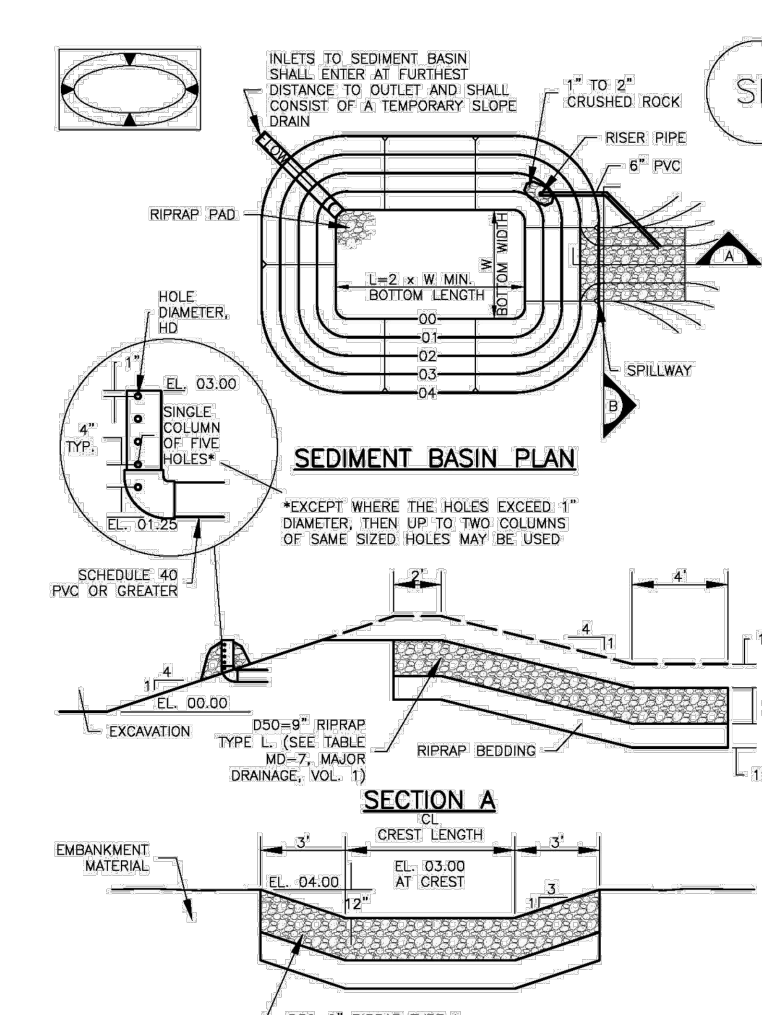
Maintenance activities include the following:

- Dredge sediment from the basin, as needed to maintain BMP effectiveness, typically when the design storage volume is no more than one-third filled with sediment.
- Inspect the sediment basin embankments for stability and seepage.
- Inspect the inlet and outlet of the basin, repair damage, and remove debris. Remove, clean and replace the gravel around the outlet on a regular basis to remove the accumulated sediment within it and keep the outlet functioning.
- Be aware that removal of a sediment basin may require dewatering and associated permit requirements.
- Do not remove a sediment basin until the upstream area has been stabilized with vegetation.

Final disposition of the sediment basin depends on whether the basin will be converted to a permanent post-construction stormwater basin or whether the basin area will be returned to grade. For basins being converted to permanent detention basins, remove accumulated sediment and reconfigure the basin and outlet to meet the requirements of the final design for the detention facility. If the sediment basin is not to be used as a permanent detention facility, fill the excavated area with soil and stabilize with vegetation.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-4

Sediment Basin (SB) SC-7



SEDIMENT BASIN PLAN

SECTION A

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-5

SC-7 Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN	Basin Bottom Width (ft)	Spillway Crest Length (ft)	Hole Diameter (ft)
1	12	3	1 1/2
2	15	4	2
3	18	5	2 1/2
4	21	6	3
5	24	7	3 1/2
6	27	8	4
7	30	9	4 1/2
8	33	10	5
9	36	11	5 1/2
10	39	12	6
11	42	13	6 1/2
12	45	14	7
13	48	15	7 1/2
14	51	16	8
15	54	17	8 1/2

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF SEDIMENT BASIN.
2. FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
3. FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY BY ACCORDANCE WITH ASTM D1556.
6. PIPE SOH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

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Sediment Basin (SB) SC-7

SEDIMENT BASIN 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 IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (0.31 METERS) BELOW THE SPILLWAY CREST.
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDS, AND MULCH, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24
DESIGNED BY:	KGV
DRAWN BY:	KGV
CHECKED BY:	TDW
FILE NAME:	21820-01DT3

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

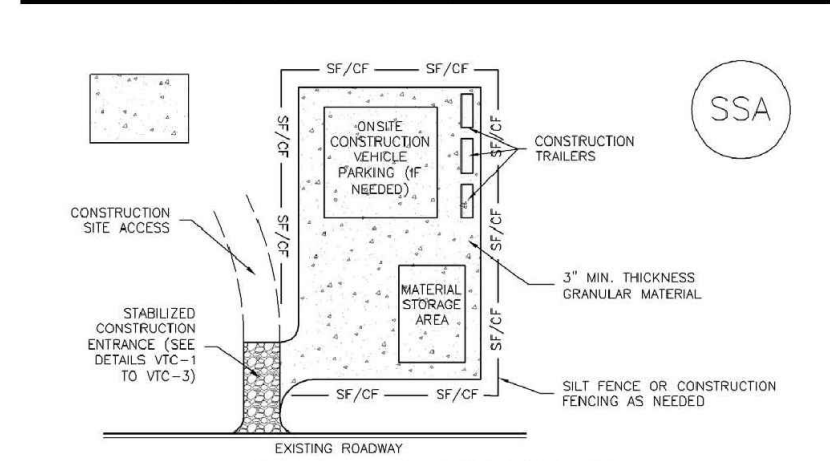
DRAWING SCALE:
 HORIZONTAL: N/A
 VERTICAL: N/A

GRADING & EROSION CONTROL DETAILS

PROJECT NO. 21820-01CSCV
 DRAWING NO.

DT3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S).
- CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, A5HTO #3 COARSE AGGREGATE OR 4" (MINUS) ROCK.
- ADDITIONAL PERIMETER BUMPS MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BUMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS 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 BUMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BUMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REPLACED OR REGRADDED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNDESIRABLE OPERATIONS.
- 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.

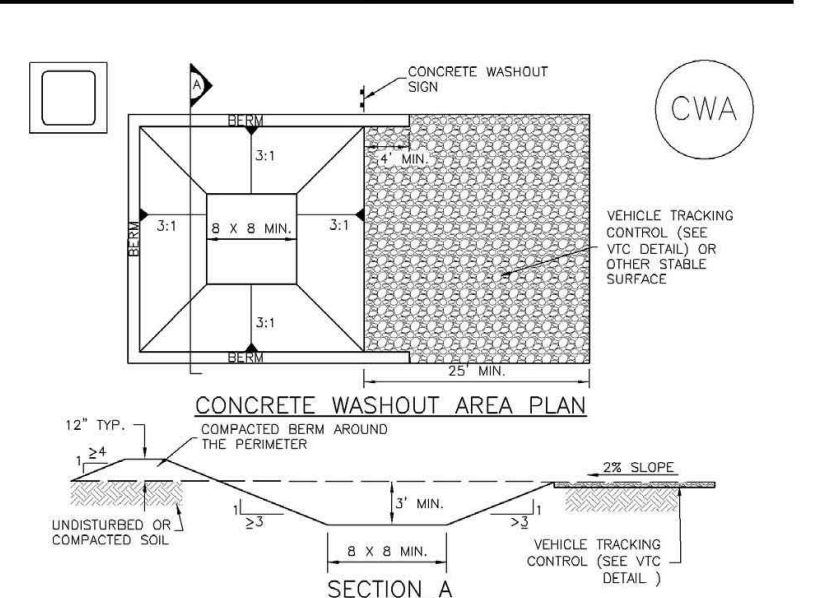
NOTE: MANY JURISDICTIONS PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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

(DETAILS ADAPTED FROM COLORADO COUNTY, COLORADO, NOT AVAILABLE IN ARIZONA)

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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 100' 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 (1/4" MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREPARED 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, NOT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE. IT SHALL BE 31" OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BEFORE SUBSEQUENT SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM 4:1 SLOPES.
- VEHICLE TRACKING FENCE SHALL BE SLOPED 2% TOWARDS THE CWA.
- STOPS 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 TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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 100' 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 (1/4" MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREPARED 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, NOT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE. IT SHALL BE 31" OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BEFORE SUBSEQUENT SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM 4:1 SLOPES.
- VEHICLE TRACKING FENCE SHALL BE SLOPED 2% TOWARDS THE CWA.
- STOPS 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 TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

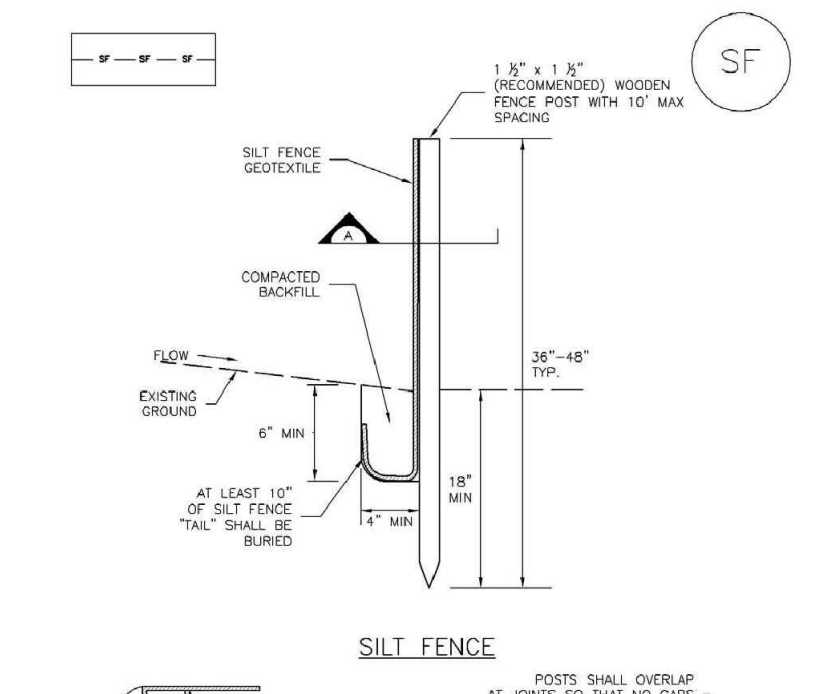
- INSPECT BUMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BUMPS 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, WASTES RESIDUE OF CONCRETE AND ALL OTHER SOLIDS 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 DEPRESSURED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

(DETAILS ADAPTED FROM COLORADO COUNTY, COLORADO, NOT AVAILABLE IN ARIZONA)

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Silt Fence (SF) SC-1



SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER FLOWING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVEN FEET (2.13 M) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR FLOWING AND DEPOSITION.
- A MINIMUM 6" BY 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE, NO ROAD GRADERS, SHOVELS, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACT SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY WIND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE GAPS BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- 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 1" ALONG THE FABRIC DOWN THE STAKE.
- 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-WALK". THE "J-WALK" 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').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- INSPECT BUMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
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- WHERE BUMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REPLACED OR REGRADDED AS NECESSARY TO THE STABILIZED CONSTRUCTION ENTRANCE/EXIT TO MAINTAIN A CONSISTENT BERM.
- SEDIMENT TRAPPED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY BROOMING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LISTED 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 ARIZONA)

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SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER FLOWING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVEN FEET (2.13 M) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR FLOWING AND DEPOSITION.
- A MINIMUM 6" BY 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE, NO ROAD GRADERS, SHOVELS, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACT SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY WIND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE GAPS BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- 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 1" ALONG THE FABRIC DOWN THE STAKE.
- 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-WALK". THE "J-WALK" 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').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

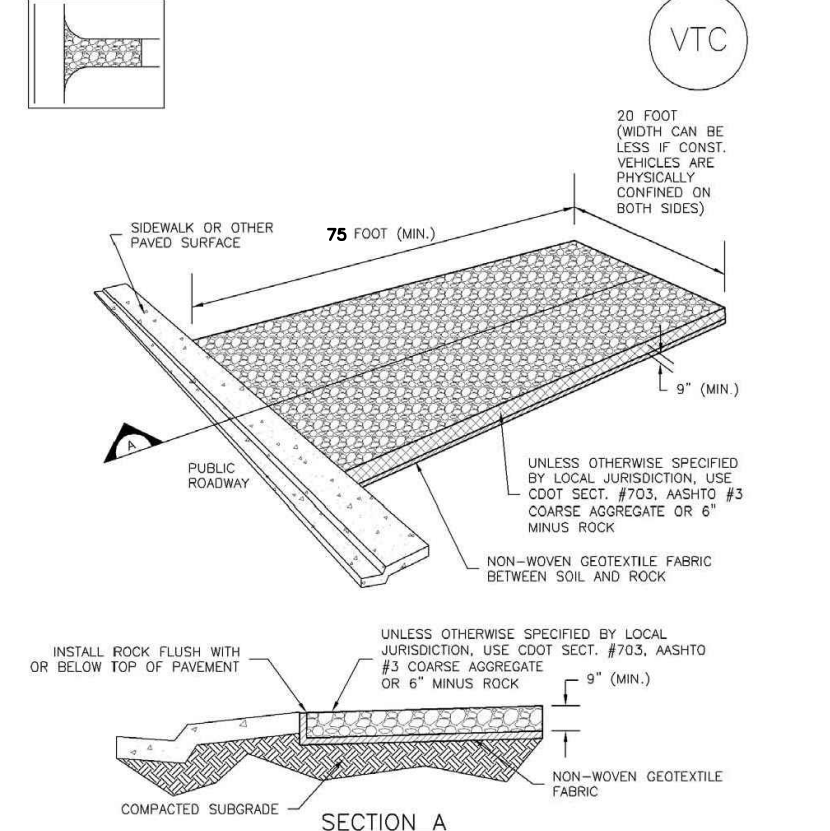
- INSPECT BUMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BUMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BUMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REPLACED OR REGRADDED AS NECESSARY TO THE STABILIZED CONSTRUCTION ENTRANCE/EXIT TO MAINTAIN A CONSISTENT BERM.
- SEDIMENT TRAPPED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY BROOMING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LISTED 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 ARIZONA)

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Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

VTC INSTALLATION NOTES

- SEE PLAN VIEW FOR VTC INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED VTC WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 100' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS UNFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE VTC MUST BE INSTALLED WITH AN IMPERMEABLE LINER (1/4" MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREPARED CONCRETE WASHOUT DEVICES OR A LINED ABOVE-GROUND STORAGE ARE SHOULD BE USED.
- THE VTC SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- VTC SHALL INCLUDE A FLAT SUBSURFACE, NOT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE. IT SHALL BE 31" OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BEFORE SUBSEQUENT SIDES AND BACK OF THE VTC SHALL HAVE MINIMUM 4:1 SLOPES.
- VEHICLE TRACKING FENCE SHALL BE SLOPED 2% TOWARDS THE VTC.
- STOPS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE VTC, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE VTC TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

VTC INSTALLATION NOTES

- SEE PLAN VIEW FOR VTC INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED VTC WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 100' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS UNFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE VTC MUST BE INSTALLED WITH AN IMPERMEABLE LINER (1/4" MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREPARED CONCRETE WASHOUT DEVICES OR A LINED ABOVE-GROUND STORAGE ARE SHOULD BE USED.
- THE VTC SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- VTC SHALL INCLUDE A FLAT SUBSURFACE, NOT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE. IT SHALL BE 31" OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BEFORE SUBSEQUENT SIDES AND BACK OF THE VTC SHALL HAVE MINIMUM 4:1 SLOPES.
- VEHICLE TRACKING FENCE SHALL BE SLOPED 2% TOWARDS THE VTC.
- STOPS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE VTC, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE VTC TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION ENTRANCE/EXIT(S).
- TYPE OF CONSTRUCTION ENTRANCE/EXIT(S) (WITH/OUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- 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.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACING OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, A5HTO #3 COARSE AGGREGATE OR 4" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

- INSPECT BUMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS 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 BUMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BUMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REPLACED OR REGRADDED AS NECESSARY TO THE STABILIZED CONSTRUCTION ENTRANCE/EXIT TO MAINTAIN A CONSISTENT BERM.
- SEDIMENT TRAPPED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY BROOMING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM LISTED 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 ARIZONA)

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TEMPORARY SEEDING NOTES

- SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER OR LIME.
- SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENED.
- SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1 AND 1 INCH FOR SLOPES STEEPER THAN 2:1.
- ANNUAL GRASSES LISTED IN THE TABLE BELOW ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAWEED, PURPLE LOOSESTRIPE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.
- THE TABLE BELOW ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
- SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
- ALL SEEDED AREAS ARE TO BE MULCHED.
- IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

MULCHING NOTES

INSTALLATION REQUIREMENTS

- MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED-AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
- HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL.
- MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
- MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES) OR WITH A TACKIFIER.
- HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
- MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

SEEDING PLAN

NATIVE SEEDING MIX

SOIL PREPARATION, FERTILIZER, SEEDING, MULCHING AND MULCH TACKIFIER WILL BE REQUIRED FOR DISTURBED AREAS EXCLUDING THE RIGHT-OF-WAYS.

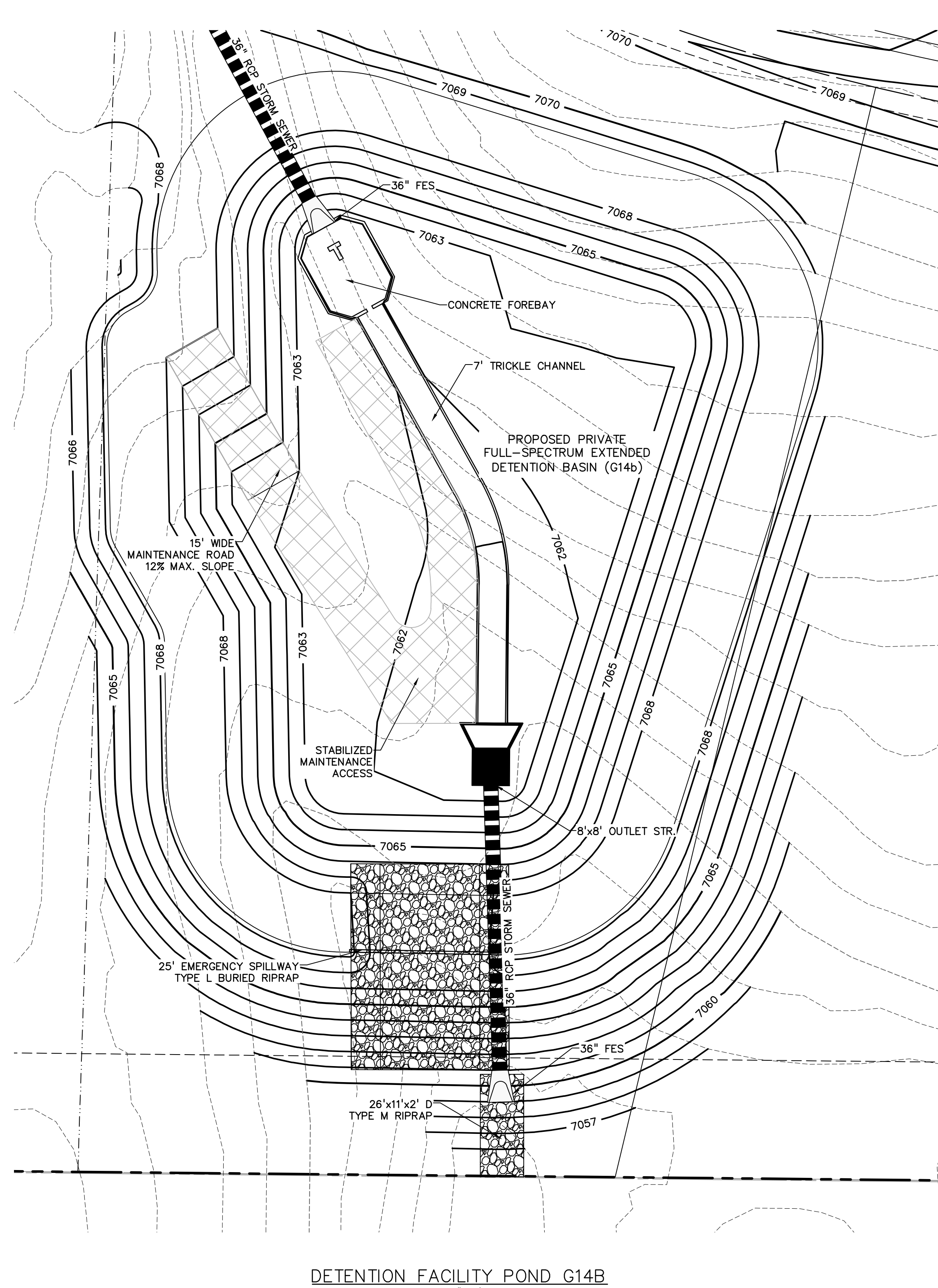
THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME	SCIENTIFIC NAME	LBS PLS/ACRE
SAND BLUESTEM V. ELIDA	ANDROPOGON HALLII	2.0
WESTERN WHEATGRASS V. ARRIBA	PASCOPYRUM SMITHII	7.0
SIDE OATS GRAMA V. VAUGHN	BOUTELOUJA CURTIPENDULA	4.0
GALLETA V. VIVA (CARYOPSIS)	HILARIA JAMESII	1.0
LITTLE BLUESTEM V. PASTUSI	SCHIZACHYRIUM SCOPARIUM	3.0
PRARIE SANDREED V. GASHEN	CALAMOLFA LONGIFOLIA	2.0
SWITCHGRASS V. NEBR 28	PANICUM VIRGATUM	1.0
BLANKETFLOWER	GALLARDIA ARISTATA	1.0
PRARIE CONEFLOWER	RATIBIDA COLUMINIFERA	0.5
BLUE FLAX	LINUM LEWISII	1.0
OATS	AVENA SATIVA	3.0
WINTER WHEAT	TRITICUM AESTIVUM	3.0
TOTAL/POUNDS/ACRE		28.5

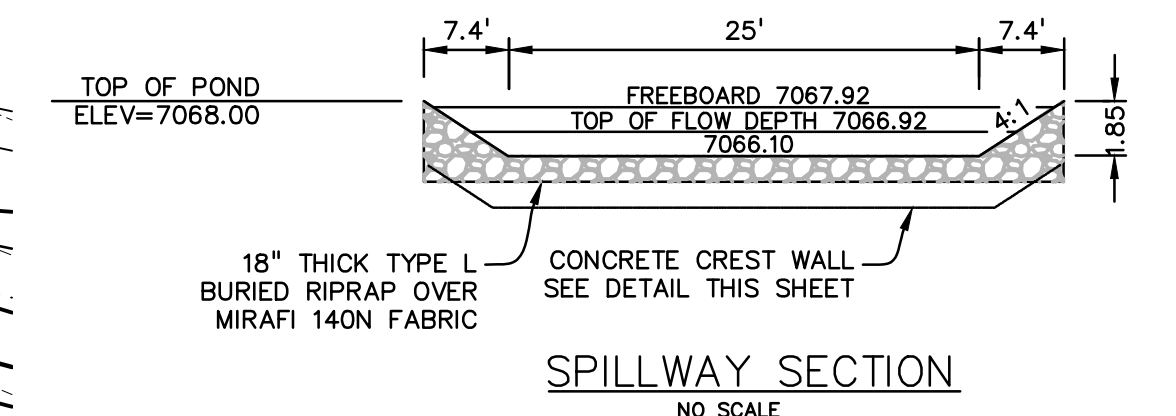
FERTILIZER	RATE PER ACRE
NITROGEN	27
PHOSPHORUS (P205)	69

SEEDING APPLICATION: DRILL SEED 0.25"-0.5" INTO TOPSOIL. AREA NOT ACCESSIBLE TO A DRILL SEEDER AND SLOPES STEEPER THAN 2:1 SHALL BE HAND BROADCAST AT DOUBLE THE ABOVE SEED RATE AND RAKED AT 1/4 TO 1/2 INTO THE TOPSOIL.

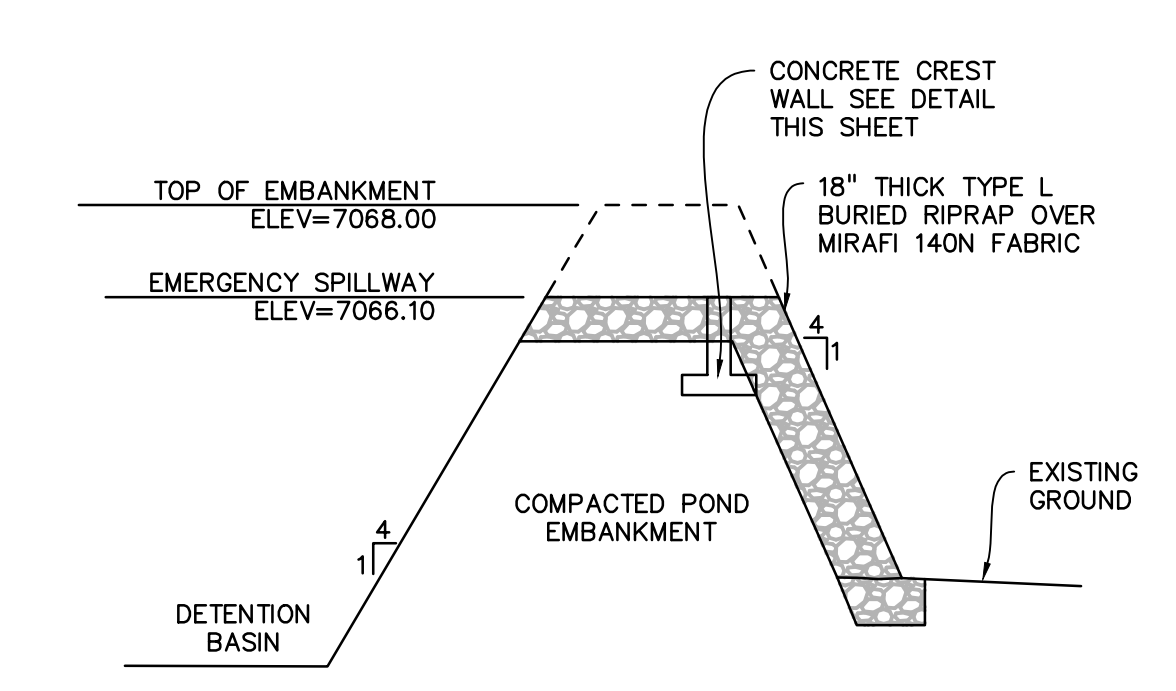
MULCHING APPLICATION: 1 1/2 TONS CERTIFIED WEED FREE NATIVE HAY PER ACRE MECHANICALLY CRIMED IN TOPSOIL IN COMBINATION WITH AN ORGANIC MULCH TACKIFIER.



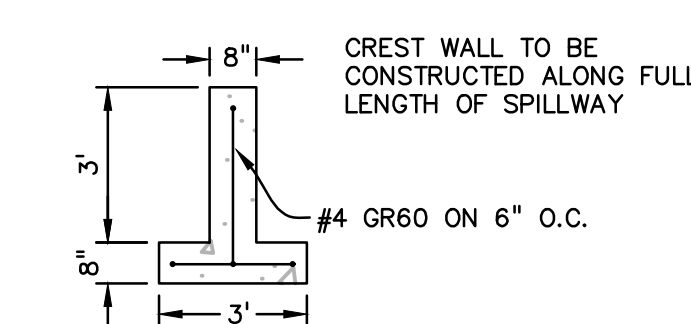
DETENTION FACILITY POND G14B
SCALE: 1"=20'



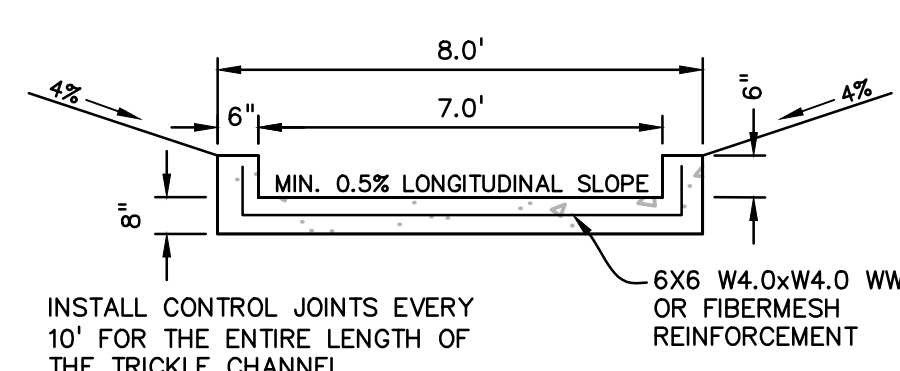
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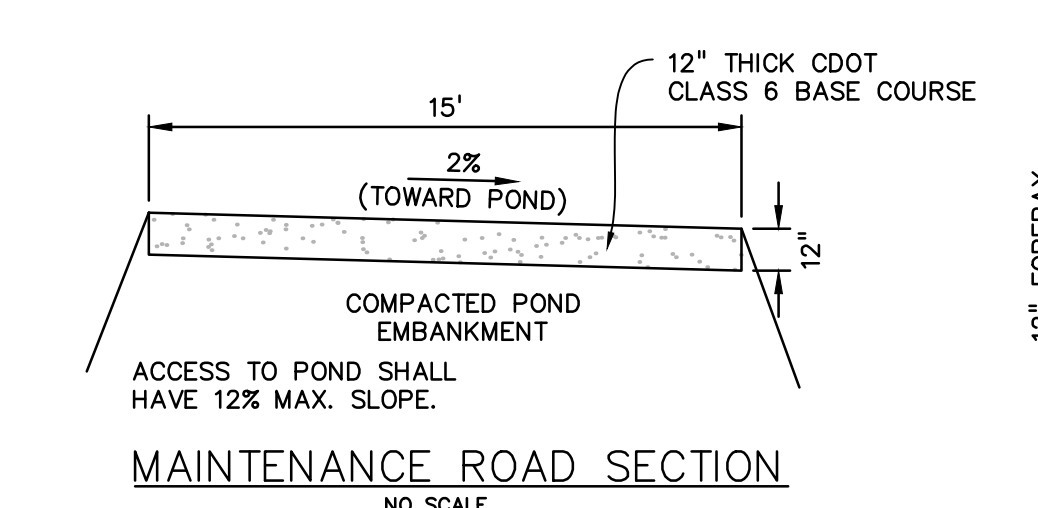
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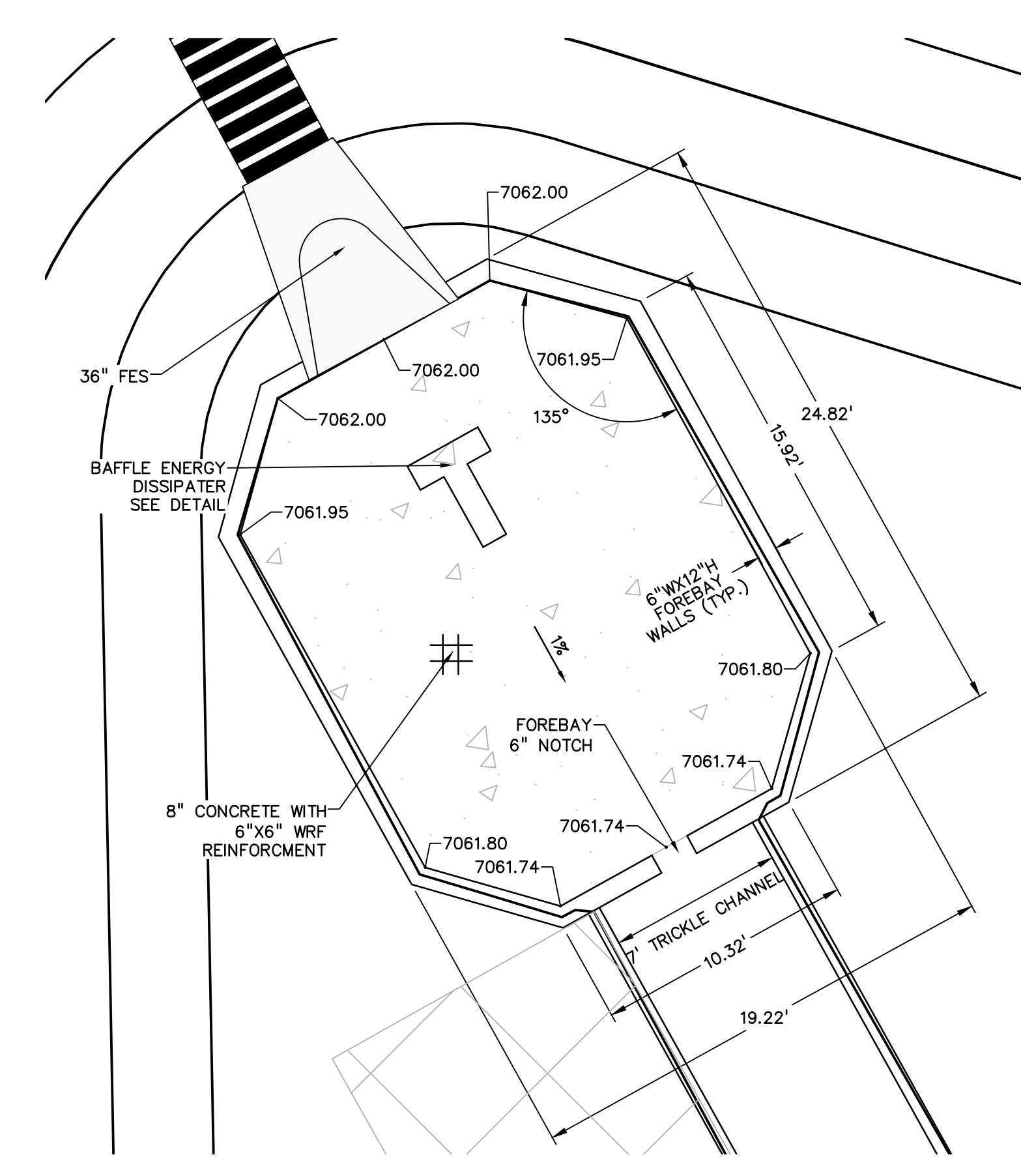
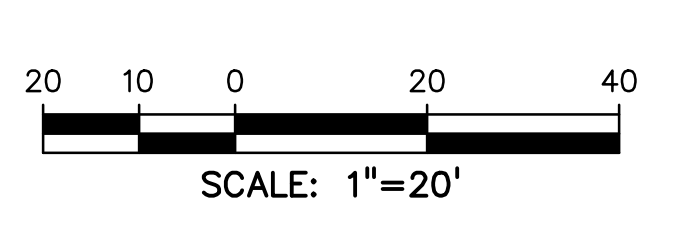
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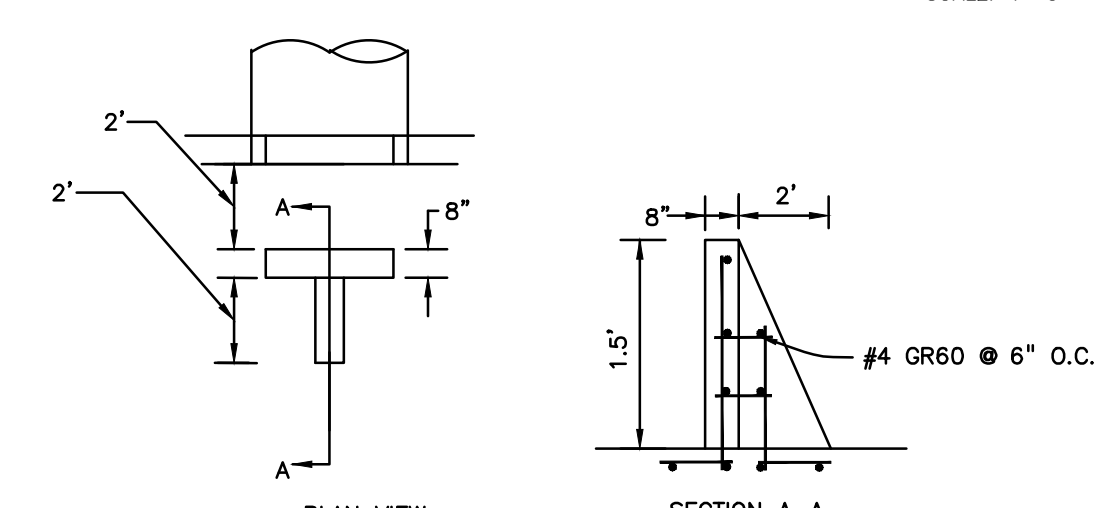
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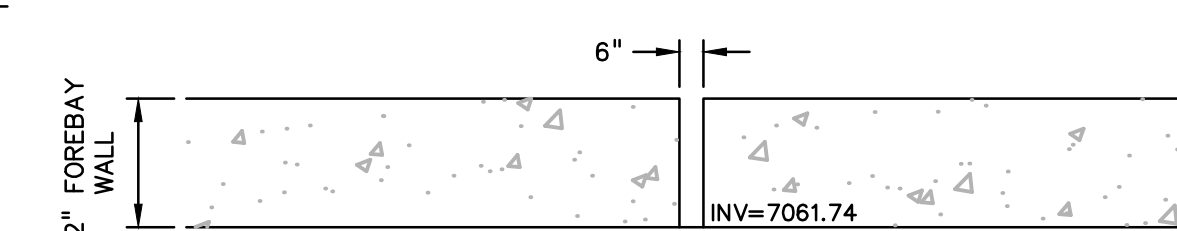
MAINTENANCE ROAD SECTION
NO SCALE



POND G14B FOREBAY
SCALE: 1"=5'



FOREBAY BAFFLE ENERGY DISSIPATORS
NO SCALE



FOREBAY NOTCH
NO SCALE

PREPARED BY:

DREXEL, BARRELL & CO.
Engineers • Surveyors
101 SAWATCH ST. #100
COLORADO SPGS, COLORADO 80903
CONTACT: TIM D. MCCONNELL, P.E.
(719)260-0887
COLORADO SPRINGS • LAFAYETTE

CLIENT:
FALCON LATIGO, LLC
5350 S. ROSLYN ST. STE #400
ENGLEWOOD, CO 80111-2125
(303) 694-0862

GRADING & EROSION CONTROL PLANS FOR:
LATIGO TRAILS
FILING NO. 10
EL PASO COUNTY
FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	9/26/24
RESUBMITTAL	11/18/24

DESIGNED BY: SBN
DRAWN BY: SBN
CHECKED BY: KGV
FILE NAME: 21820-01PD

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: N/A

POND G14B
DETAILS

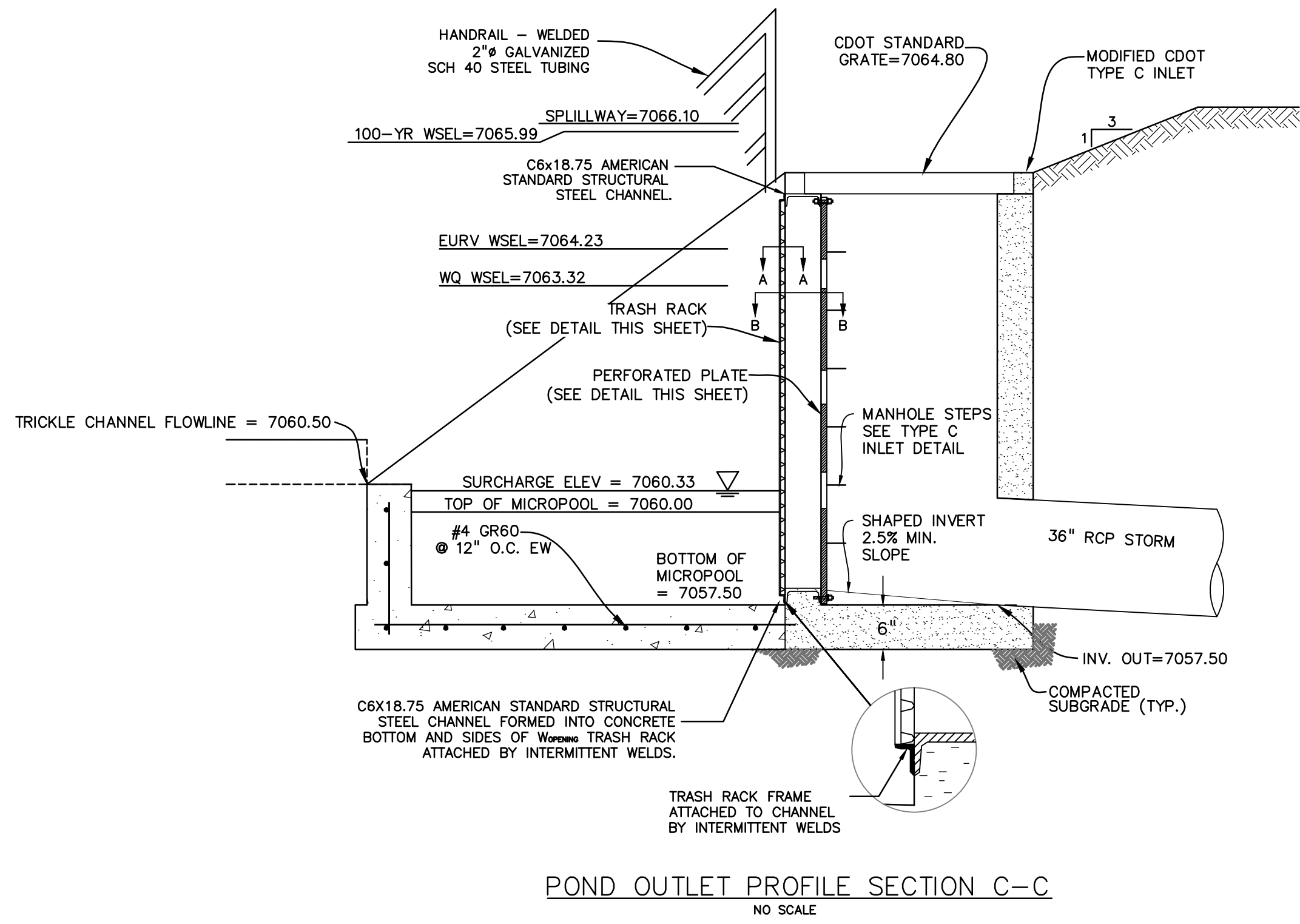
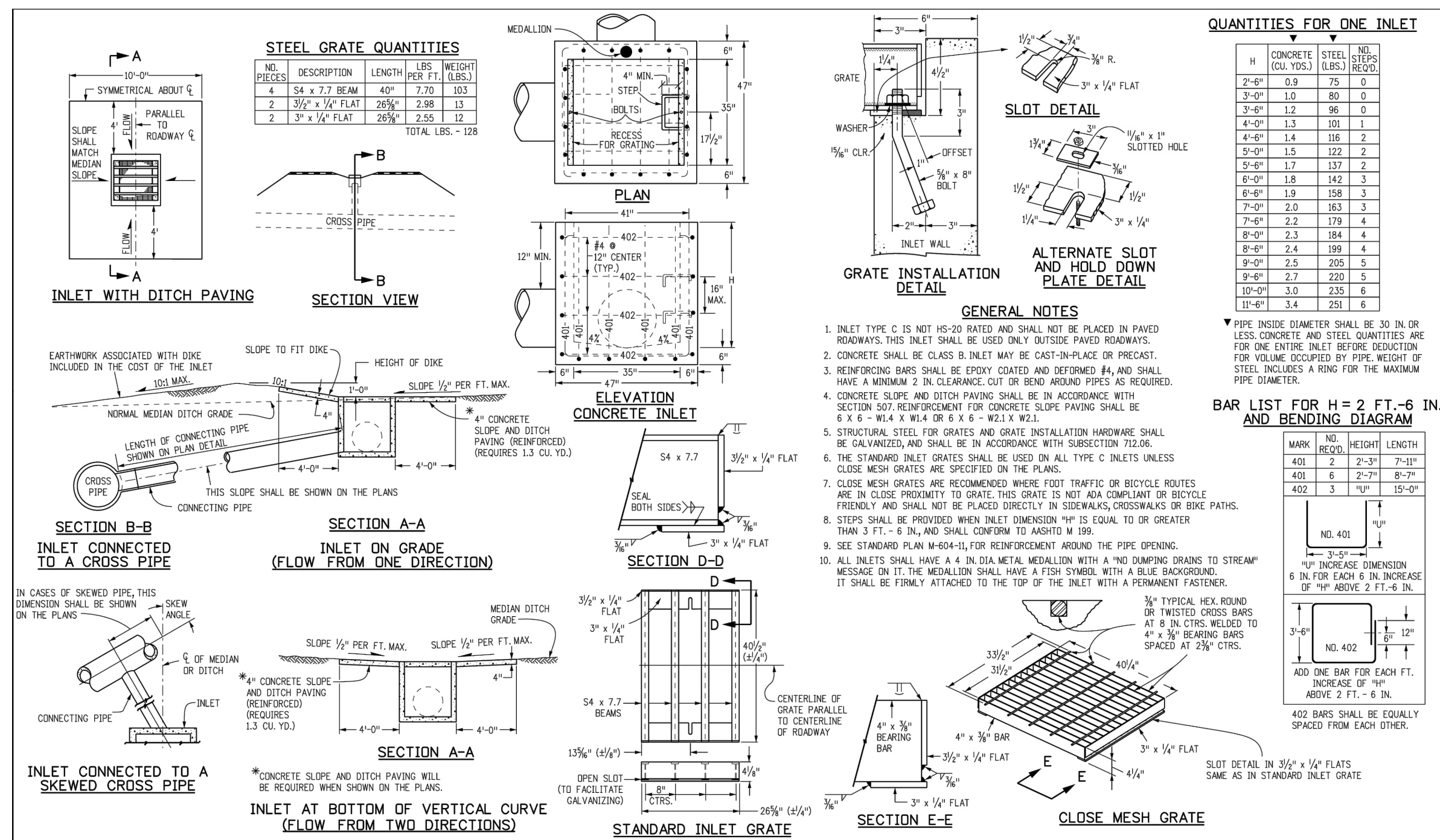
PROJECT NO. 21820-01CSCV
DRAWING NO.

PD1

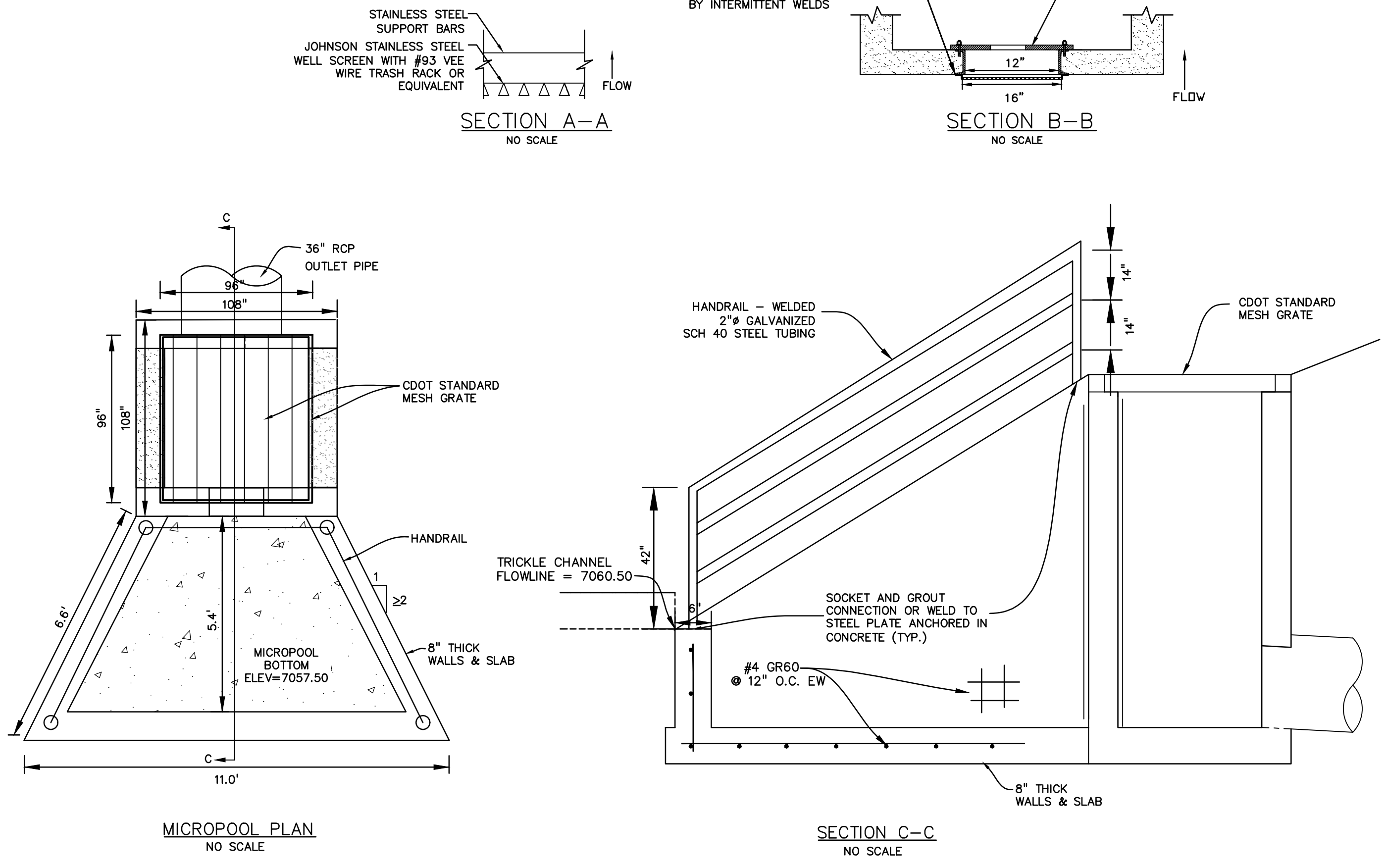
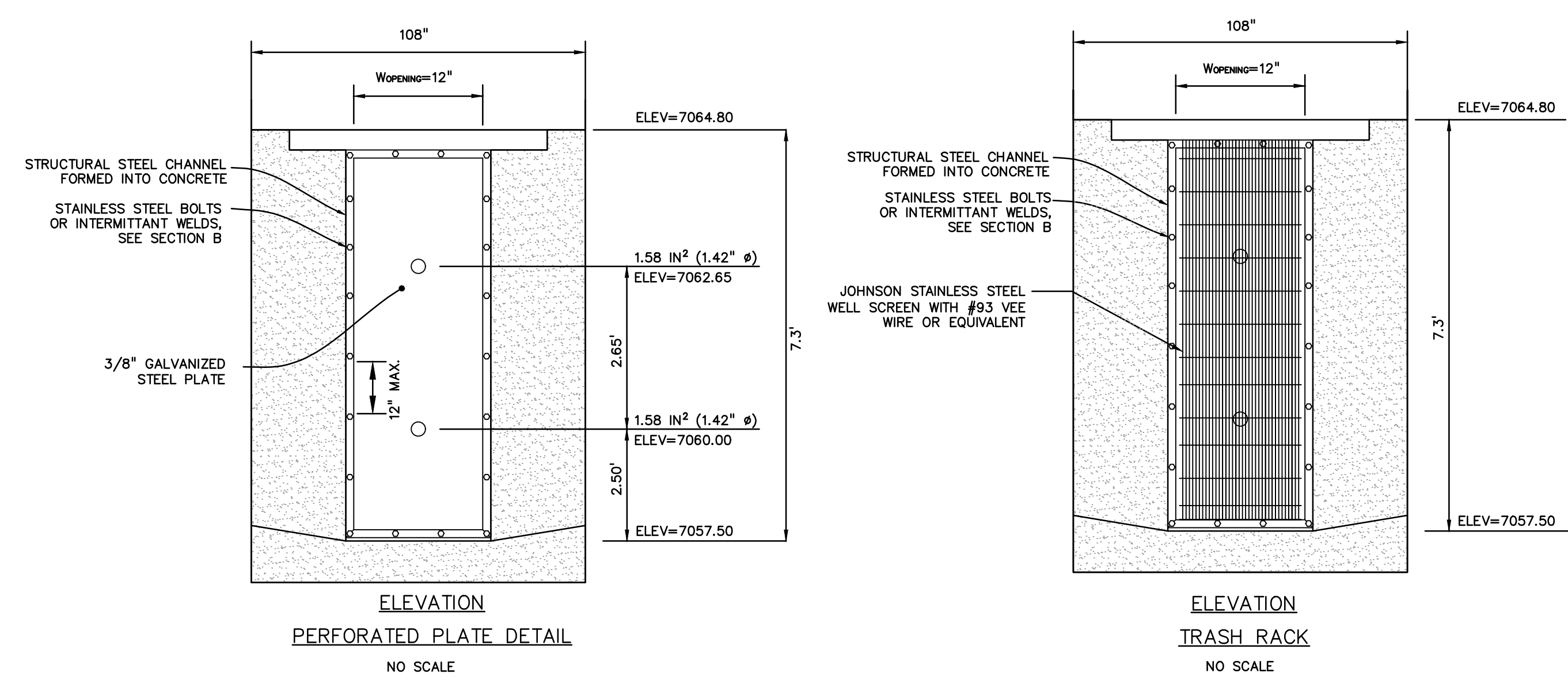
811 Know what's below.
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CALL 3-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

SF2421

SHEET: 10 OF 15



Computer File Information		Sheet Revisions		Colorado Department of Transportation 4001 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9820 Project Development Branch DD/LTA	STANDARD PLAN NO.	
Creation Date: 07/04/12	Initials: DD	Date:	Comments:		INLET, TYPE C	M-604-10
Least Modification Date: 07/04/12	Initials: LTA			Sheet No. 1 of 1		
File Path: www.cdot.state.co.us/Business/Design/Support	CD					
Drawing File Name: 604010001.dgn	CD					
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English	CD			



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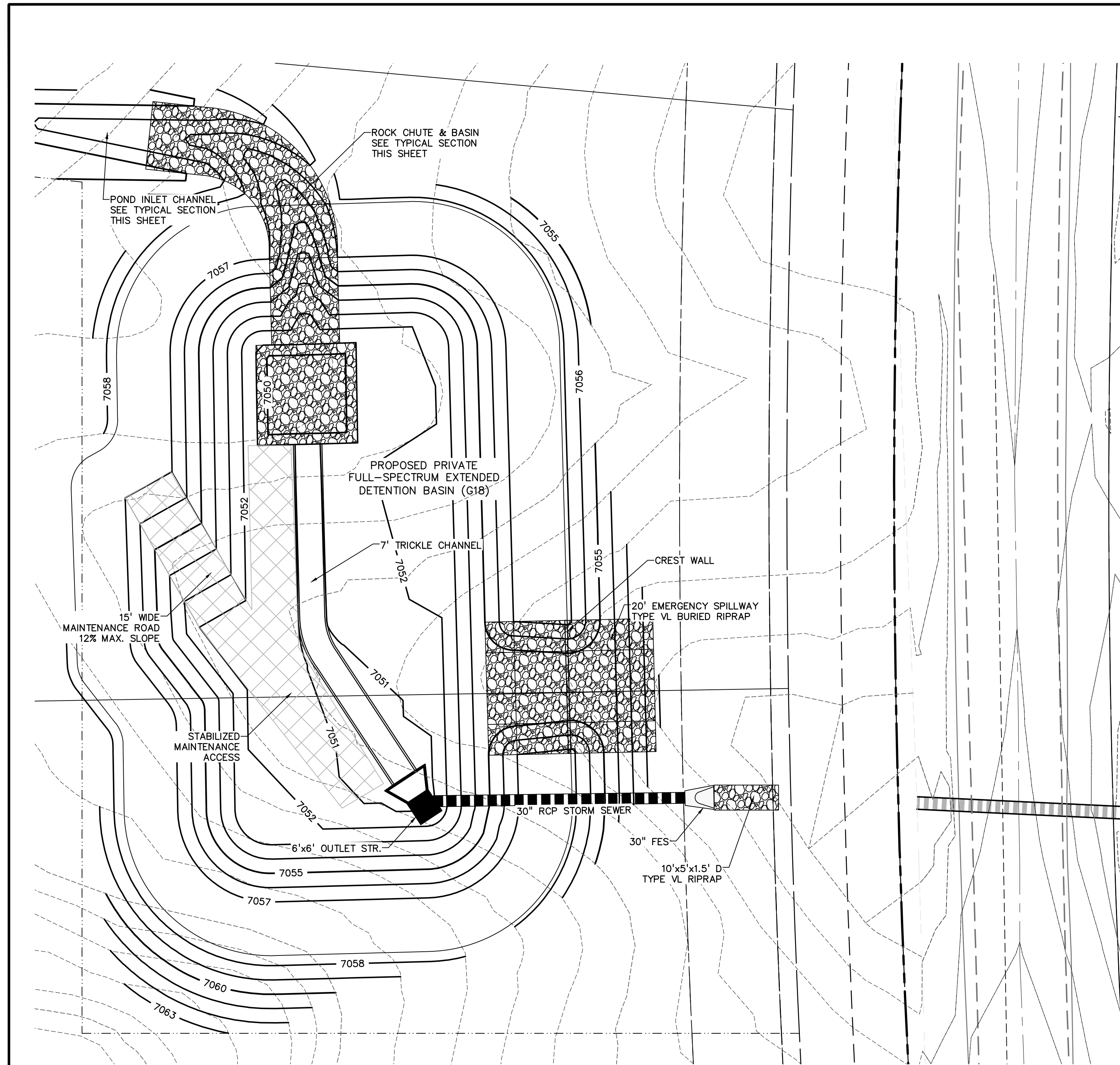
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DRAWN BY: SBN
CHECKED BY: TDM
FILE NAME: 21820-01OUT

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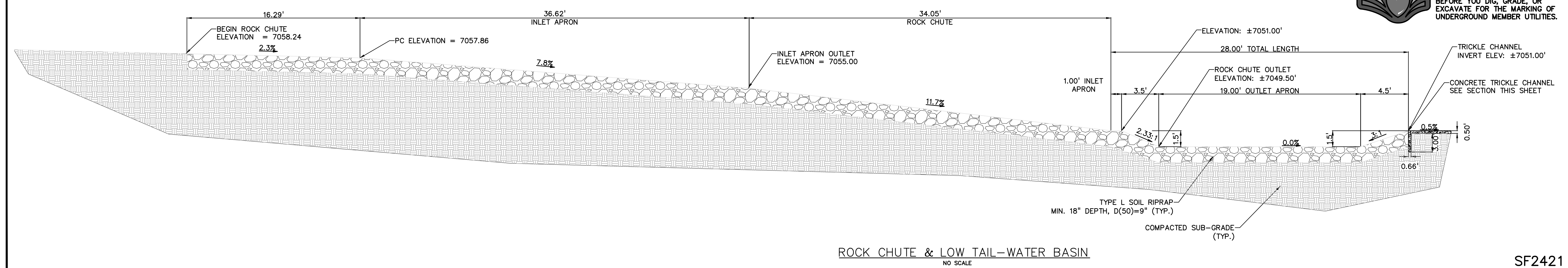
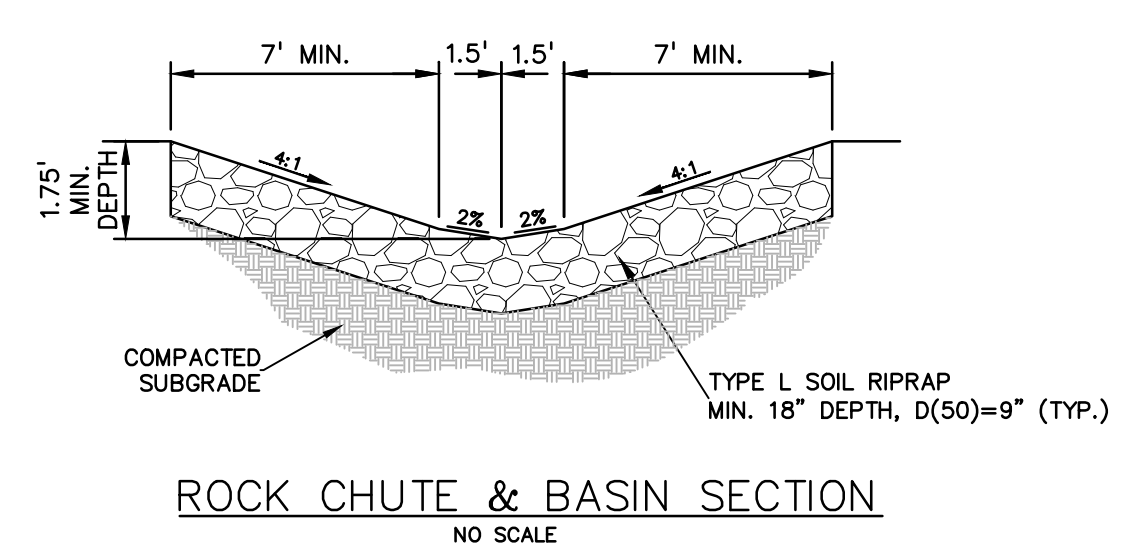
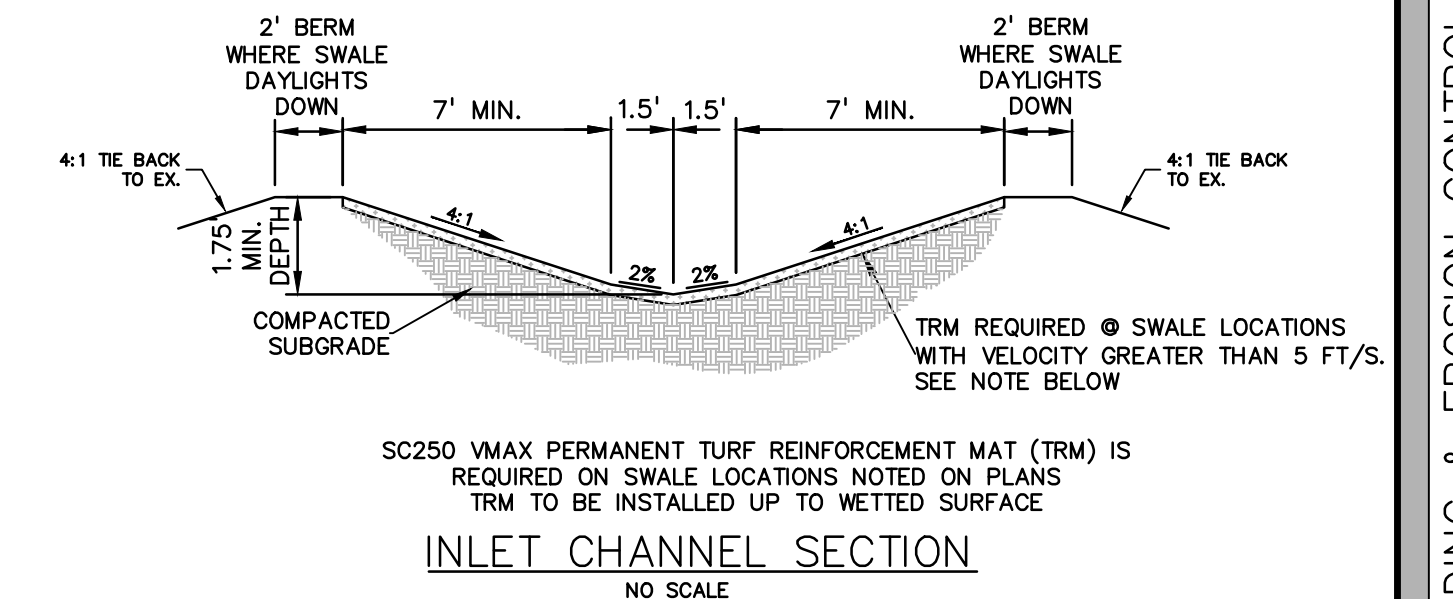
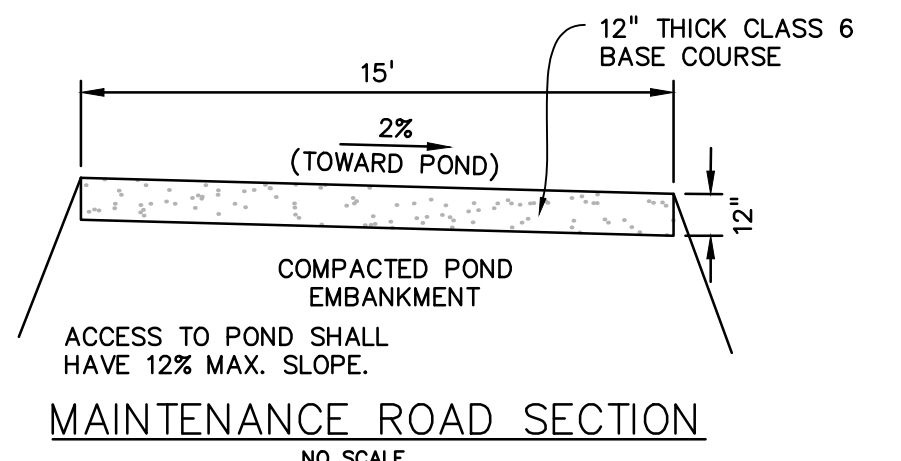
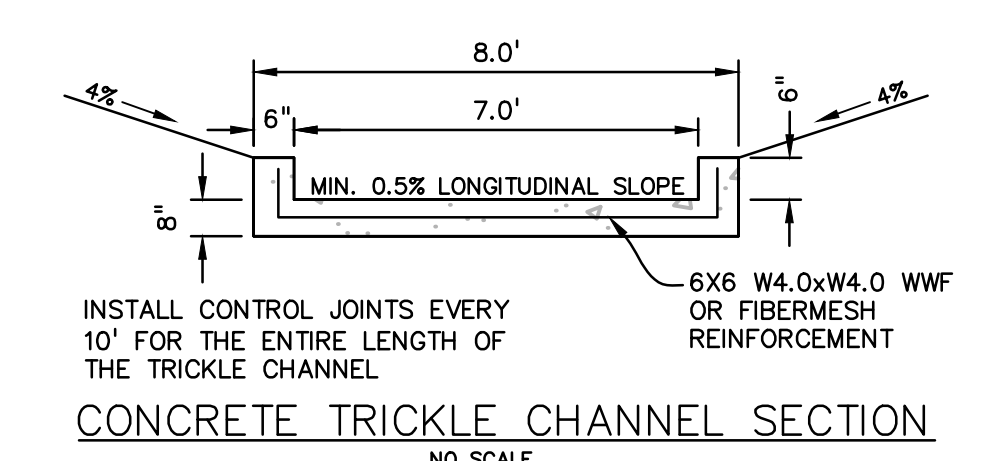
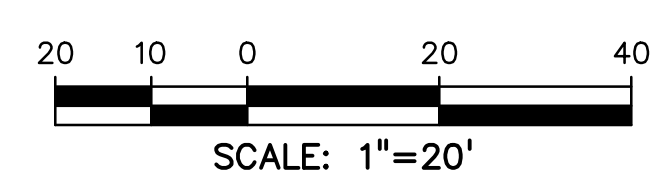
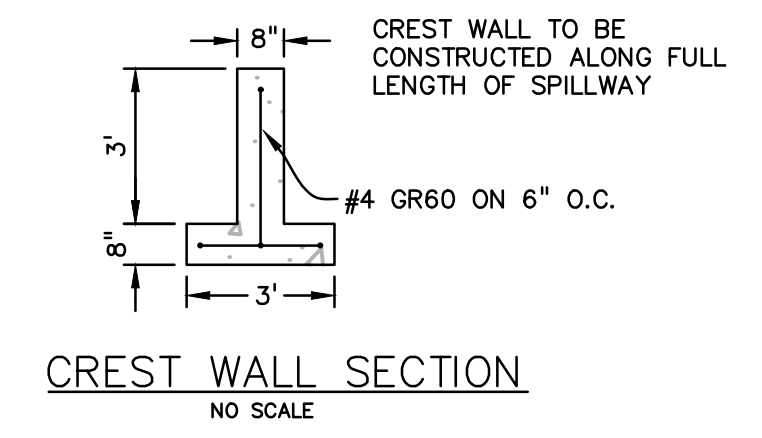
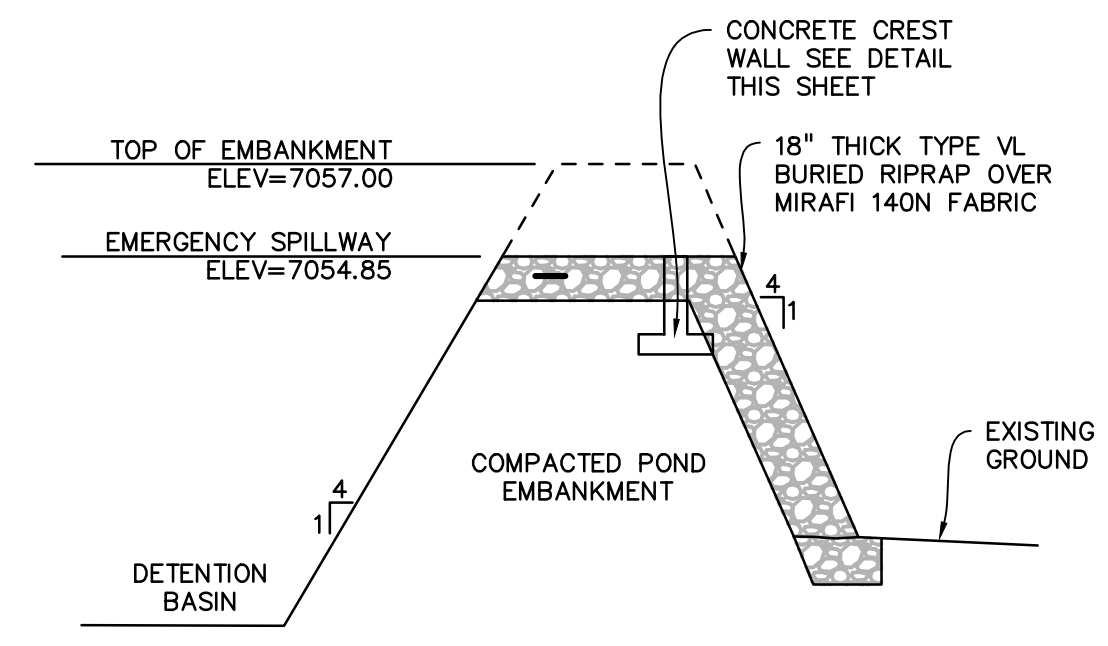
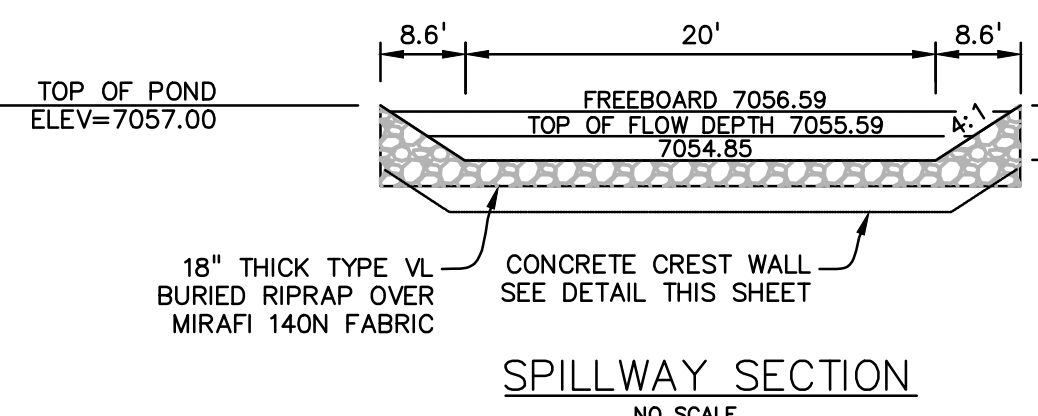
DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

POND G14b
OUTLET
STRUCTURE
PROJECT NO. 21820-01CSCV
DRAWING NO.

OUT1
SHEET: 11 OF 15



DETENTION FACILITY POND G18
SCALE: 1"=20'



PREPARED BY:

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VERTICAL: N/A

POND G18
DETAILS

PROJECT NO. 21820-01CSCV
DRAWING NO.

PD2

SHEET: 12 OF 15

SF2421

STEEL GRATE QUANTITIES

NO.	DESCRIPTION	LENGTH PER FT. (LBS.)	WEIGHT PER FT. (LBS.)	QUANTITY
1	54 x 7.7 BEAM	40"	2.75	103
2	3/8" x 1/2" FLAT	265"	2.98	13
3	3" x 1/2" FLAT	265"	2.51	12
		TOTAL LBS. = 128		

QUANTITIES FOR ONE INLET

H	CONCRETE (100 YDS)	STEEL (LBS.)	NO. 402 BARS
2'-0"	0.9	75	0
2'-2"	1.0	80	0
2'-4"	1.1	85	0
2'-6"	1.2	90	0
2'-8"	1.3	95	0
2'-10"	1.4	100	0
3'-0"	1.5	105	0
3'-2"	1.7	110	0
3'-4"	1.8	115	0
3'-6"	1.9	120	0
3'-8"	2.0	125	0
3'-10"	2.1	130	0
4'-0"	2.2	135	0
4'-2"	2.3	140	0
4'-4"	2.4	145	0
4'-6"	2.5	150	0
4'-8"	2.7	155	0
4'-10"	2.8	160	0
5'-0"	2.9	165	0

GENERAL NOTES

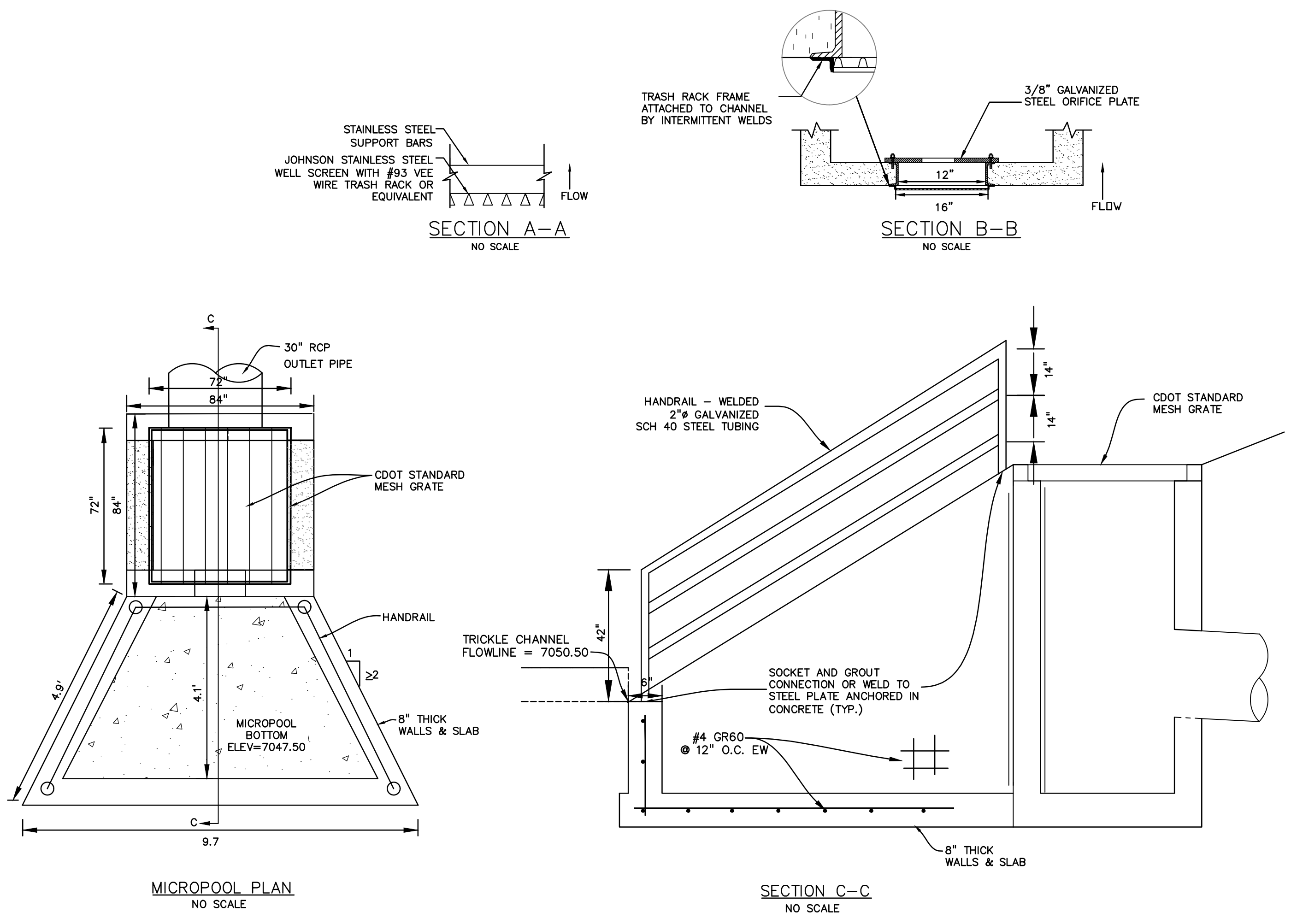
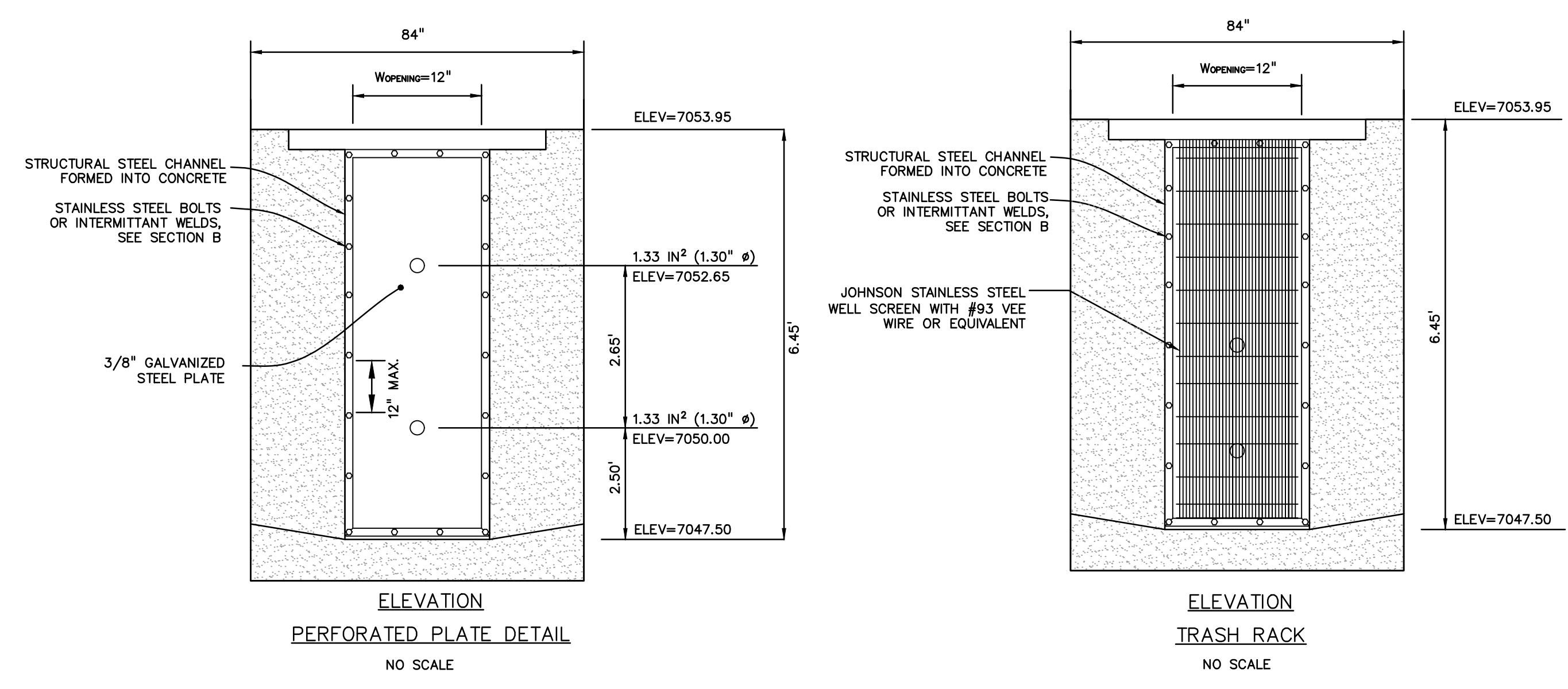
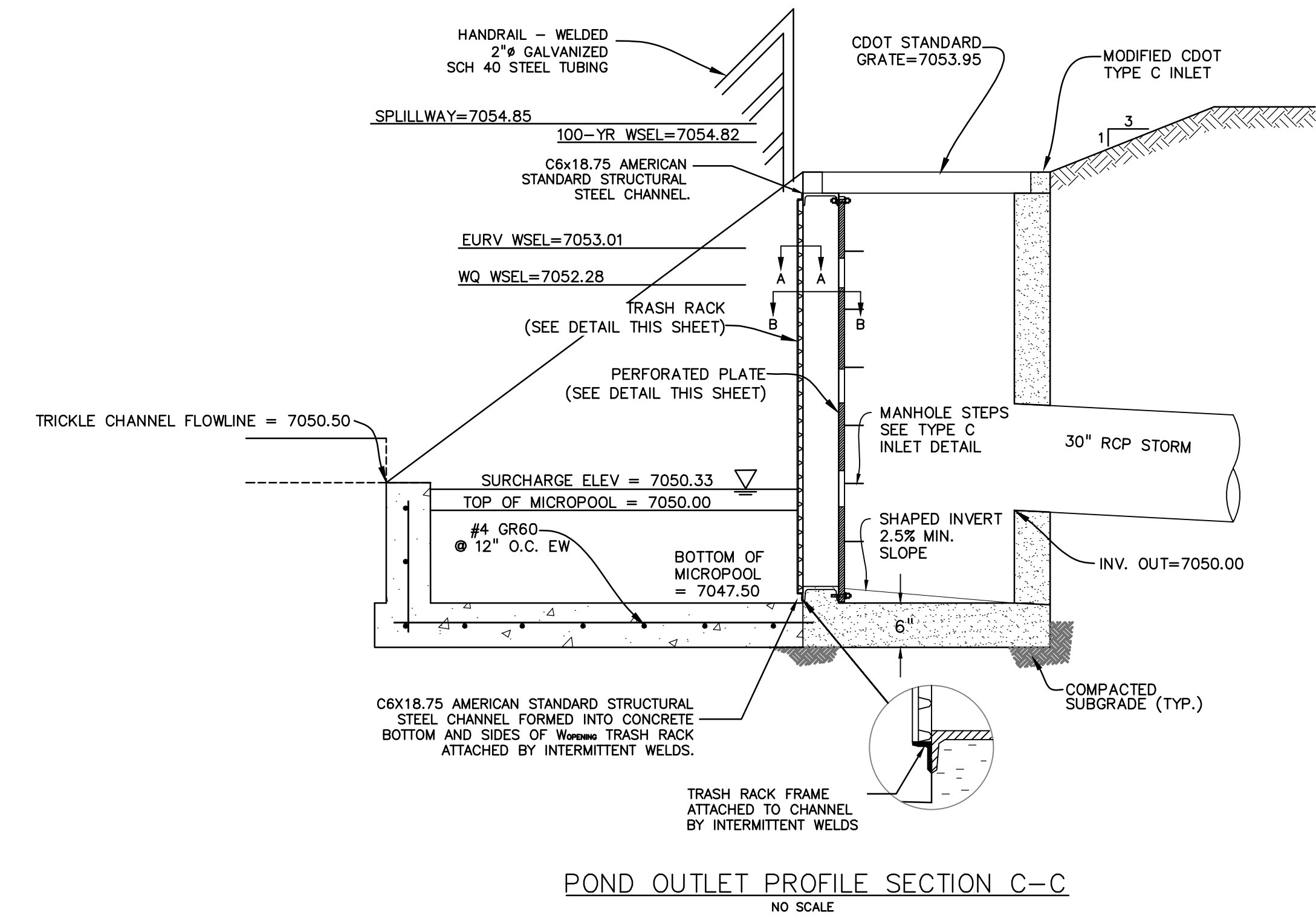
- INLET TYPE C IS NOT HD-30 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
- CONCRETE SHALL BE CLASS B INLET MAY BE CAST-IN-PLACE OR PRECAST.
- REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED #4 AND SHALL HAVE A MINIMUM 2" IN CLEARANCE OUT OR BEAR AROUND PIPES AS REQUIRED.
- CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 507 REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6" x 6" - 1/4" x 1/4" @ 6" x 6" - 1/4" x 1/4" WELLS.
- STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 710.26.
- THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
- CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
- STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT. - 0 IN. AND SHALL CONFORM TO ADA 4.8.1.
- SEE STANDARD PLAN M-404-SL FOR REINFORCEMENT AROUND THE PIPE OPENING.
- ALL INLETS SHALL HAVE A 4" DIA METAL MEDALLION WITH A "NO DUMPING GRASS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.

BAR LIST FOR H = 2 FT. - 6 IN. AND BENDING DIAGRAM

MARK	NO. REQ'D	LENGTH
NO. 402	2	2'-0"
NO. 402	6	2'-2"
NO. 402	3	10"

INLET, TYPE C

STANDARD PLAN NO. M-604-10
Sheet No. 1 of 1



- PERFORATED PLATE NOTES:**
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DESIGNED BY: SBN
DRAWN BY: SBN
CHECKED BY: TDM
FILE NAME: 21820-01OUT

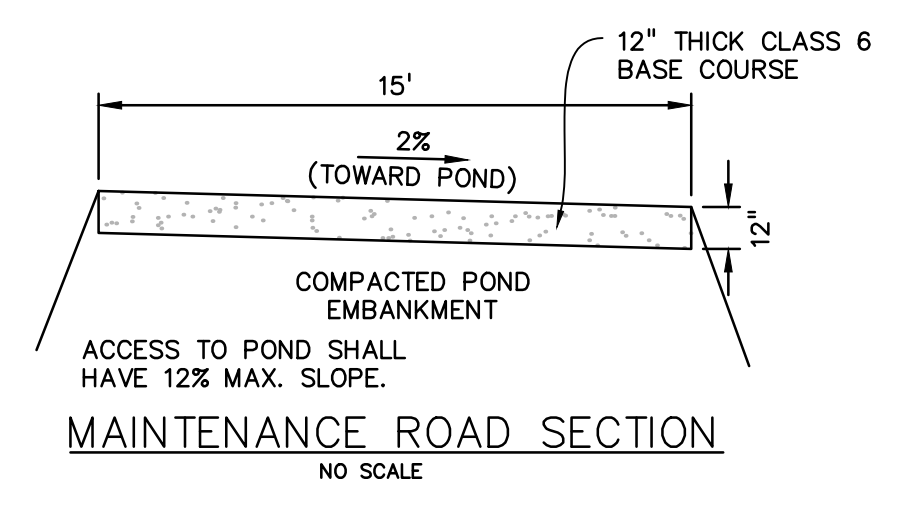
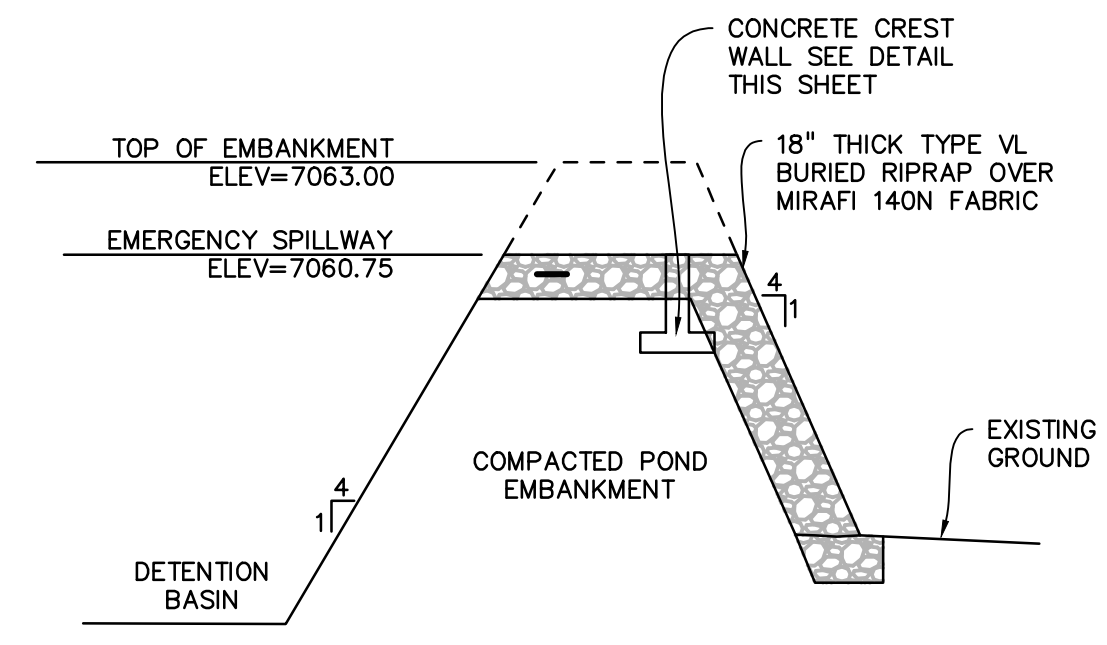
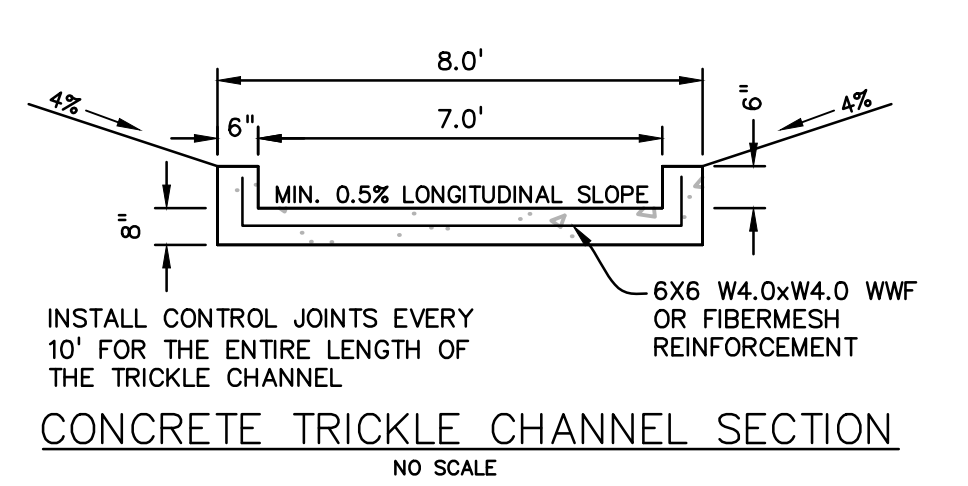
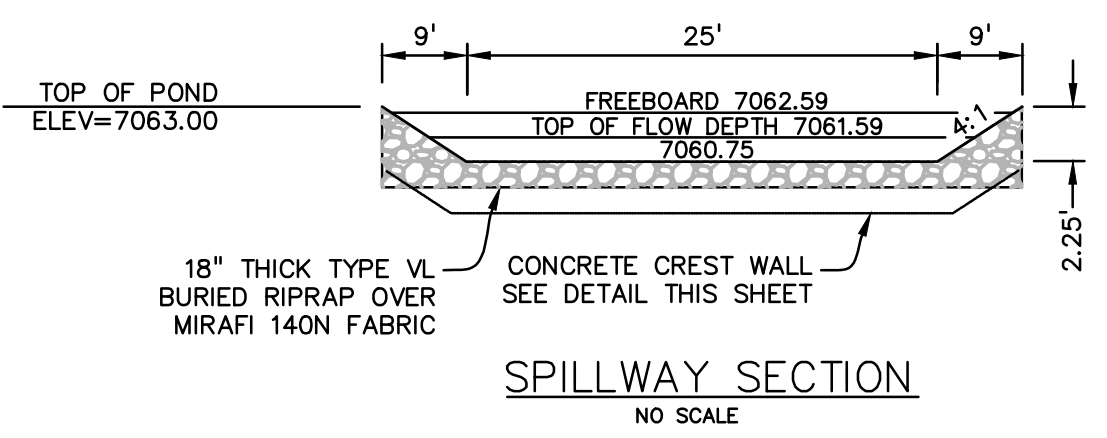
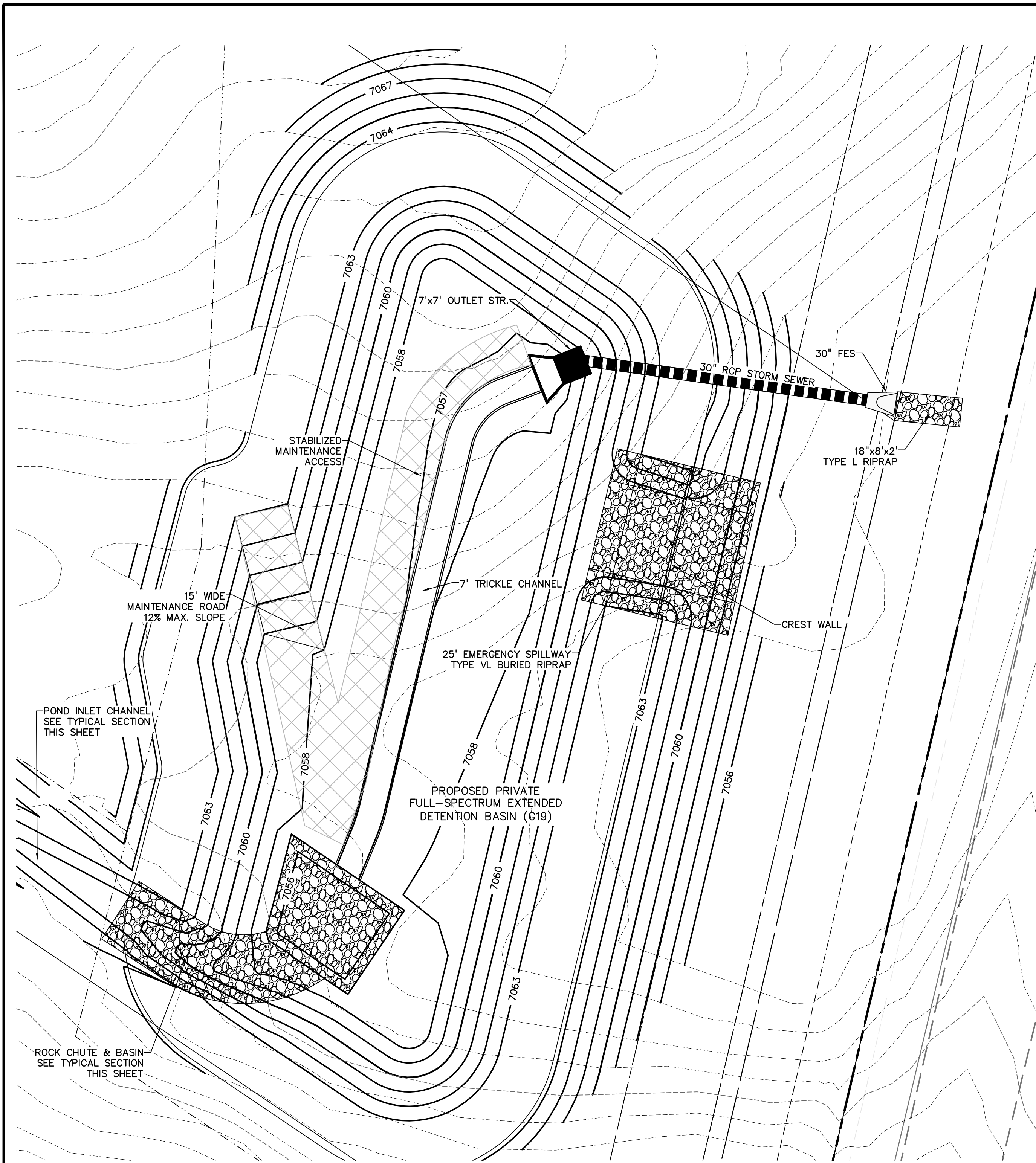
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

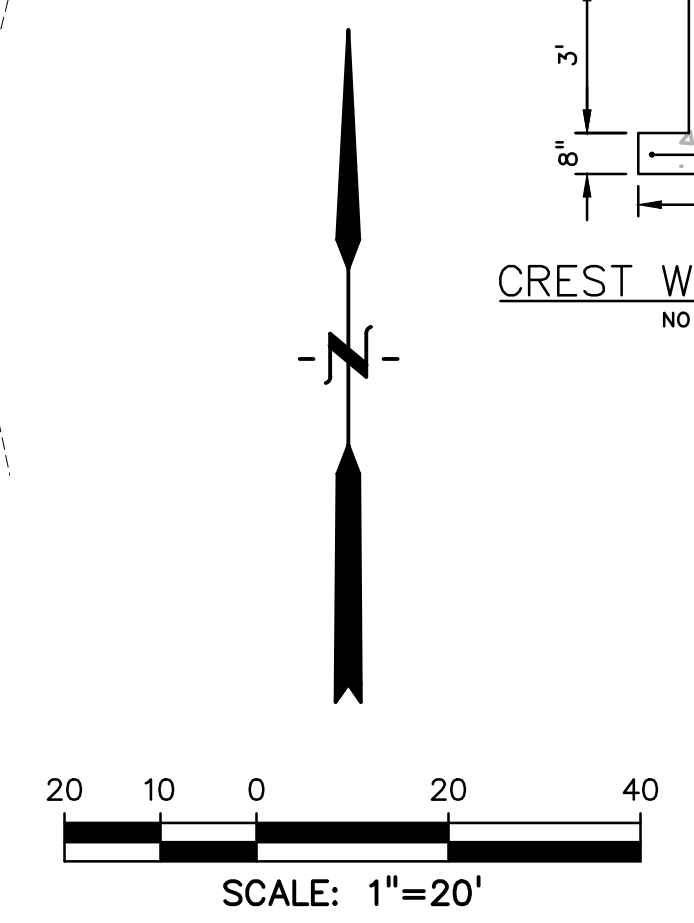
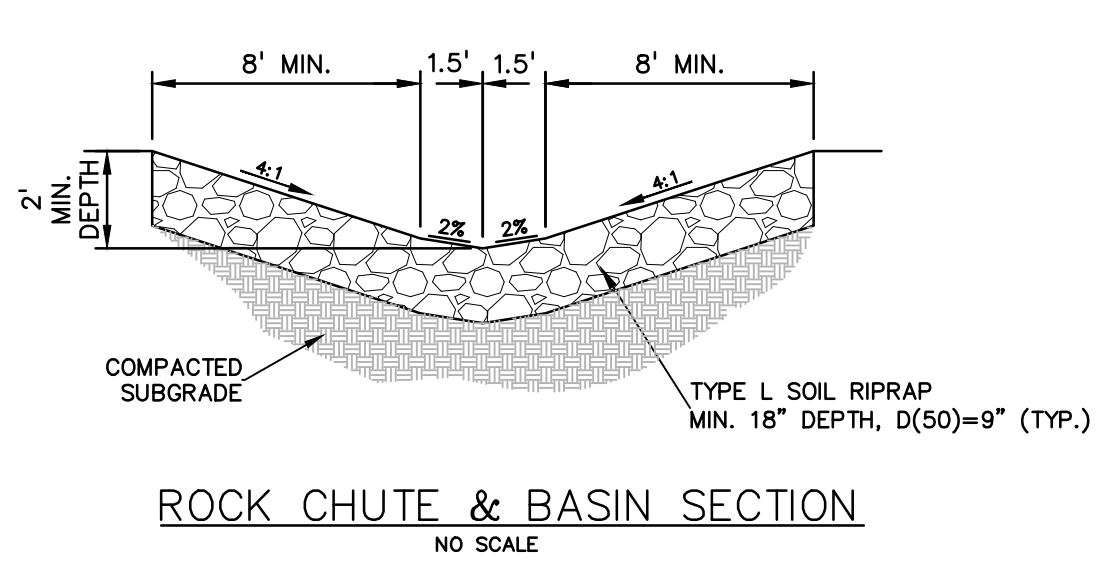
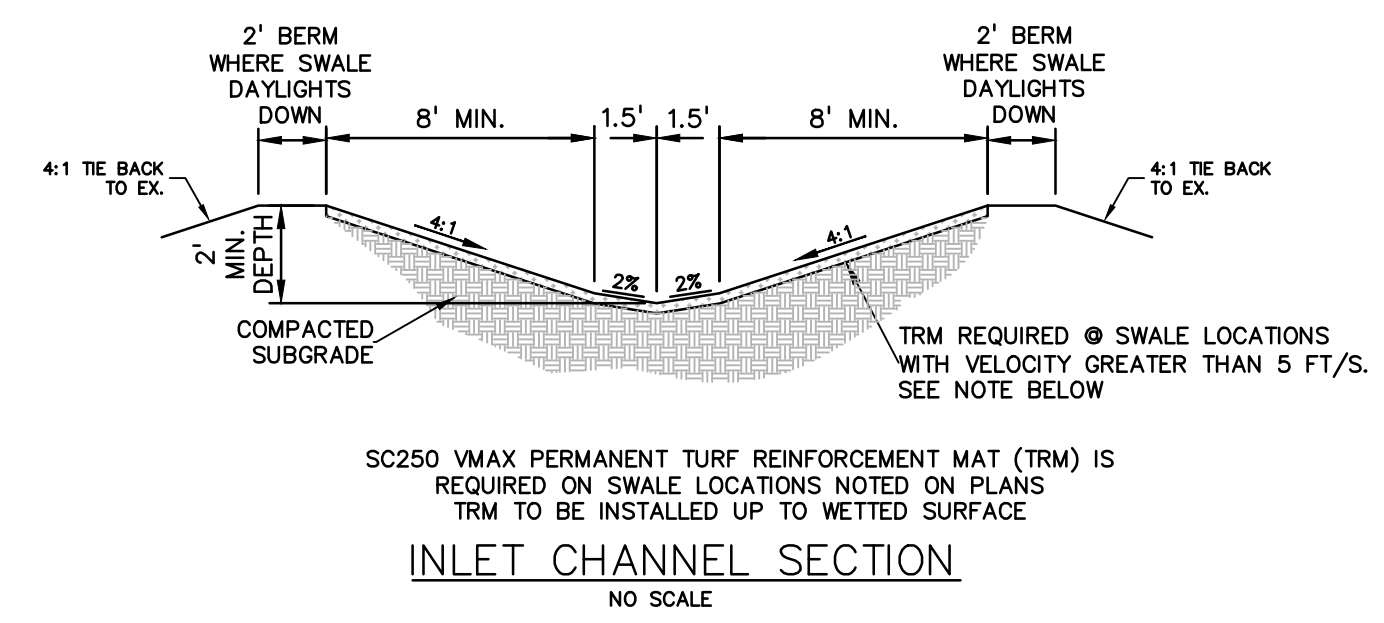
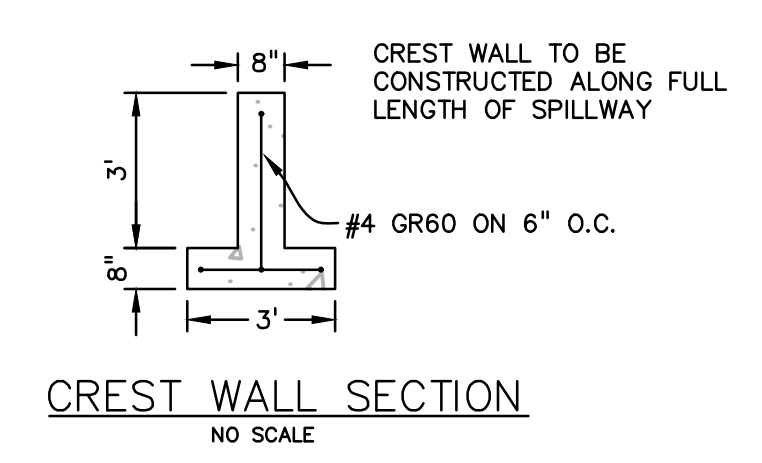
POND G18
OUTLET
STRUCTURE

PROJECT NO. 21820-01CSCV
DRAWING NO.

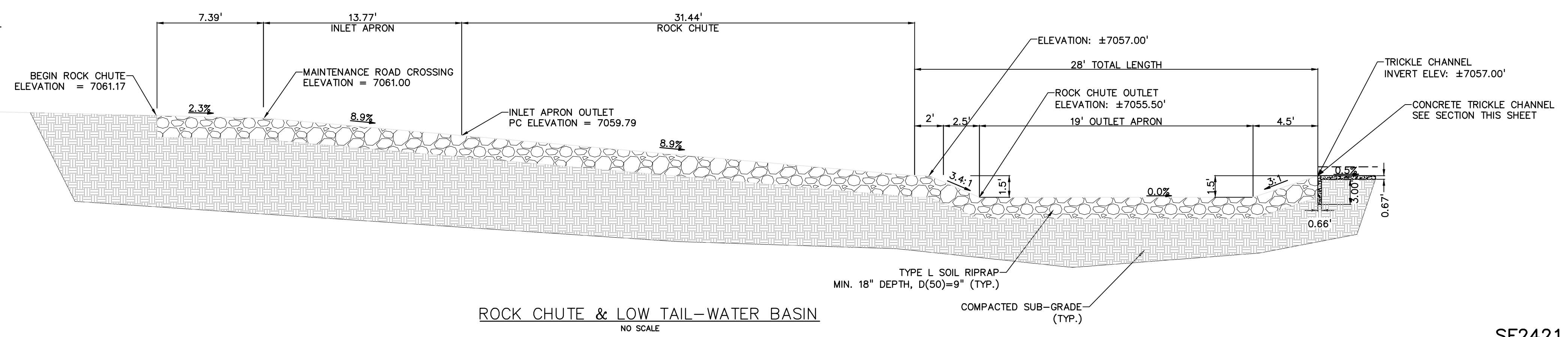
OUT2



SPILLWAY SECTION
NO SCALE



DETENTION FACILITY POND G19
SCALE: 1"=20'



PREPARED BY:



CLIENT:

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DRAWING SCALE:
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VERTICAL: N/A

POND G19
DETAILS

PROJECT NO. 21820-01CSCV
DRAWING NO.

PD3

SHEET: 14 OF 15



SF2421

