



ADDENDUM #1 MATHIAS CANYON DEBRIS BASIN IMPROVEMENTS

The following changes are hereby made to the Contract Documents for the above referenced Project:

DOCUMENT 00 41 23 BID FORM: *The Bid Schedule has been updated as follows and shall be replaced with the attached:*

- Items #9 and #10 were updated to reflect the storm drain that will be removed.
- Item #19 was added to the bid.
- Item #20 was updated to include the type of reinforced fabric to be used on the spillway. Mirafi TM14S HPTRM or approved equal (such as Pyramat 50 or 75), tan in color, shall be used in the spillway area. This line item includes anchoring and covering the mat per the manufacturer's recommendations.
- Additive Alternate #1 has been included after the Base Bid. This work is for the proposed piping of Mathias Creek below the canal (see Sheet 10 of drawings).

DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS: *Replace SC 5.03.A with the following:*

- A. Report dated March 18, 2016, prepared by AGECE Applied Geotech, for Proposed Evans and Mathias Canyon Debris Basin Sites.

This geotechnical report will be posted on the project website at www.jonescivil.com.

DOCUMENT 01 11 01 MEASUREMENT AND PAYMENT: *Section 1.9 of this document has been updated and shall be replaced with the attached.*

PART 5 - DRAWINGS: *The project drawings have been updated as follows and shall be replaced with the attached:*

- The Cover Sheet has been updated to include Sheet 10, "Mathias Creek Piping"
- Sheet 3 of the drawings has been updated to include updated information on the alignment of the existing storm drain and manholes that are to be removed. Sheet 3 was also updated to include a note on the turf reinforcement mat that is to be installed on the emergency spillway.
- Sheet 10, "Mathias Creek Piping", has been added to the project drawings. This sheet includes the proposed piping of the open ditch from below the canal to an existing storm drain pipe. This work will be included in the bid as "Additive Alternate #1."



This Addendum is hereby attached to and made part of the Bidding Documents and each Bidder shall acknowledge receipt of this Addendum on the Bid Form.

Attachments:

- Bid Schedule
- Measurement and Payment
- Project Drawings

Project Engineer: Matt Robertson, P.E.
Jones & Associates
mattr@jonescivil.com
801-644-6680

**BID SCHEDULE (ADDENDUM #1)
PERRY FLOOD CONTROL DISTRICT
MATHIAS CANYON DEBRIS BASIN IMPROVEMENTS**

CONTRACTOR: _____

BASE BID

Item #	M&P Reference*	Bid Item Description	Estimated Quantity	Unit	Unit Price**	Bid Price
1	MP001	Mobilization	1	ls	\$	\$
2	MP002	UPDES storm water compliance (over One Acre)	1	ls	\$	\$
3	MP500	Clear and grub site (approx. 1.7 ac)	1	ls	\$	\$
4	MP502	Site Excavation - including construction of embankment (approx. 12,650 cy cut, 10,344 cy fill)	1	ls	\$	\$
5	MP503	Remove excess material (approx. 2,300 cy)	1	ls	\$	\$
6	MP617	Untreated base course (UTBC)	300	ton	\$	\$
7	MP520a	Widen and grade existing access road (1,700 lf)	1	ls	\$	\$
8	MP217	Divert water during construction	1	ls	\$	\$
9	MP201	Remove existing manhole	3	ea	\$	\$
10	MP200	Remove existing 24" pipe	150	lf	\$	\$
11	MP201	Remove existing concrete diversion structure	1	ea	\$	\$
12	MP205	Furnish and install 24" RCP CL-III culvert through embankment	91	lf	\$	\$
13	MP205	Furnish and install 24" RCP CL-III to Mathias Creek and to Evans Canyon	198	lf	\$	\$
14	MP650a	Furnish and install concrete anchor wall on 24" RCP	2	ea	\$	\$
15	MP211	Furnish and install inlet structure including rip-rap	1	ea	\$	\$
16	MP211	Furnish and install control structure including rip-rap	1	ea	\$	\$
17	MP212	Furnish and install flared end section including rip-rap	1	ea	\$	\$
18	MP208	New 5' diameter manhole	1	ea	\$	\$
19	MP213	Connect existing pipe to new manhole	1	ea	\$	\$
20	MP615	Furnish and install reinforced geotextile fabric for spillway (Mirafi TM14S HPTRM or approved equal including anchor pins per Manufacturer's recommendations)	176	sy	\$	\$

21	MP215	Construct new rip-rap stream channel cross section	125	lf	\$	\$
22	MP512	Furnish and install erosion control mat	3,450	sy	\$	\$
23	MP706u	Re-seed with native seed mix (Utah Seed "Cabin Mix" or approved equal)	5,900	sy	\$	\$

Total Base Bid (Items 1-23): \$ _____

ADDITIVE ALTERNATE #1 – Mathias Creek Piping

Item #	M&P Reference*	Bid Item Description	Estimated Quantity	Unit	Unit Price**	Bid Price
A1	MP001	Mobilization	1	ls	\$	\$
A2	MP002	UPDES storm water compliance (under One Acre)	1	ls	\$	\$
A3	MP205	Furnish and install 18" RCP CL-III	480	lf	\$	\$
A4	MP208	New 4' diameter manhole	4	ea	\$	\$
A5	MP213	Connect existing pipe to new manhole	2	ea	\$	\$

Total Additive Alternate #1 (Items A1-A5): \$ _____

***To go directly to Measurement and Payment click here.**

****Unit Price shall contain no more than 2 decimal points (e.g., \$0.00)**

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

1.9 DESCRIPTION OF BID ITEM (Addendum #1)

M&P Reference	Bid Item	Unit	Payment Includes	Notes
MP001	Mobilization	ls	<p>All costs associated with mobilizing and demobilizing equipment and materials to and from the project site, mobilization, demobilization, establishment of offices, buildings, all OSHA required safety measures, sanitation, and other facilities necessary for the Work, bonds, snow removal, dust control, fees, permits (not specified as paid for elsewhere), administrative services, construction notifications, identifying and marking of construction limits and all costs associated with the Work that are not included in other bid items.</p> <p>Payment shall be as follows:</p> <p>Percent of Original Contract Amount (Completed) --> Percent of Mobilization to be (Paid): 5% --> 50%, 25% --> 25%, 75% --> 25%</p>	
MP002	UPDES Storm Water Compliance (Over One Acre)	ls	<p>Compliance with the requirements of the Utah Pollutant Discharge Elimination System (UPDES) program including the Construction General Permit. Compliance includes the preparation of, and amendments to, a Storm Water Pollution Prevention Plan (SWPPP) by the Contractor, or authorized representative. Preparing a complete SWPPP including filing a Notice of Intent (NOI) to begin the project and filing a Notice of Termination (NOT) at the conclusion of the project, maintenance, inspections, and any other work necessary to comply with the SWPPP. Best management practices such as storm water gravel inlet sediment filters, silt fencing, erosion control mats, wash down pads, containment pads, dust abatement, regular clean-up, street sweeping, etc. Includes applications, permits, notifications, and other correspondence associated with the permit process. This item shall cover all aspects of construction.</p>	<p><i>A recommended SWPPP template can be found on the State's Department of Environmental Quality website.</i></p>

MEASUREMENT AND PAYMENT

MP200	Remove existing 24" Pipe	lf	Removal and disposal of existing piping of the type, size and class shown on the Drawings. Includes unclassified excavation, saw-cutting of pipe, backfill to grade, compaction, load, haul, lawful disposal of removed piping and other related materials, associated disposal fees, and handling of all active drainage flows.	
MP201	Remove Storm Drain Structure	ea	Removal and disposal of existing structure (manhole, cleanout, inlet box, combo box, etc.) shown on the Drawings. Includes unclassified excavation, dewatering, disconnection and protection of existing piping, removal and disposal of concrete collars, backfill to grade, compaction, load, haul, lawful disposal of removed structure and other related materials, associated disposal fees, and handling of all active drainage flows.	
MP205	New Storm Drain Pipe	lf	Piping of the type, size and class shown on the Drawings. No classification of excavated materials shall be made, and excavation shall include the removal and subsequent handling of all earth, shale, loose or cemented gravel, loose rock, solid rock, or other materials of whatever nature excavated or otherwise removed in the performance of the project work, dewatering, trench safety measures, lawful disposal of excess material, backfill to grade, compaction, foundation gravel, pipe bedding, grade controls, all necessary pothole investigation of existing utilities to predetermine any conflicts with other utilities or structures (horizontal or vertical), coordination with Engineer for resolution of predetermined conflicts, high-resolution video inspections after installation and prior to final walkthrough, cleaning of new pipe prior to video inspections, correction of any material or installation-related defect, and restoration of miscellaneous improvements damaged as a result of completing this item.	<i>No payment will be given for the relaying of pipe that could have been avoided through potholing and conflict resolution with the Engineer, nor for the laying of pipe out of sequence (low elevation to high). Making adjustments to other pipes or structures in conflict will only be allowed if pipe grade adjustments to the new pipe cannot be made.</i>

MEASUREMENT AND PAYMENT

MP208	New 5' diameter manhole	ea	Construction of precast concrete manhole, unclassified excavation, dewatering, backfill to grade, compaction, foundation gravel, concrete base section with formed flow lines, manhole sections, cone section or flat lid, adjusting manhole sections to meet design grade, grade rings, ring and cover, manhole steps, sealing of joints, watertight grout, handling of all active drainage flows, connection of all new piping systems to the manhole structure (flush with the inside of the walls and grouted smoothly), and restoration of miscellaneous improvements damaged as a result of completing this item.	
MP211	Furnish and install control structure	ea	Construction of precast or cast-in-place concrete structure, unclassified excavation, dewatering, backfill to grade, compaction, foundation gravel, concrete base section with formed flow lines, sections, lid, supports, adjusting sections or forming and pouring reinforced structure to meet design grade, ring and cover, frame and grate, control gate, anchor bolts, access steps, finishing and curing concrete, sealing of joints, watertight grout, handling of all active drainage flows, connection of all new piping systems to the structure (flush with the inside of the walls and grouted smoothly), installation of rip-rap at inlet/outlet as shown on the drawings, and restoration of miscellaneous improvements damaged as a result of completing this item.	
MP212	Furnish and install flared end section	ea	Construction of precast flared end section, unclassified excavation, dewatering, backfill to grade, compaction, foundation gravel, grade control, trash rack (where specified), sealing of joints, watertight grout, handling of all active drainage flows, connection to pipe, contouring of adjacent ground to match flowline, installation of rip-rap at outlet as shown on the drawings, and restoration of miscellaneous improvements damaged as a result of completing this item.	
MP213	Connection of New Storm Drain Structure to Existing Pipe	ea	Locating existing pipe, excavation, dewatering, backfill, compaction, handling of all active drainage flows, adjustments to structure to accommodate existing pipe, modifying and forming the structure base to create a smooth transition between the new and existing flowlines, cutting of pipe, pipe connections flush with the inside of the walls and grouted smoothly with watertight grout.	<i>New storm drain structure will be paid for under separate item.</i>

MEASUREMENT AND PAYMENT

MP215	Construct new rip-rap stream channel cross section	sy	Construction of rip-rap of the size, thickness, and type listed in the Bidding Schedule and shown on the Drawings, unclassified excavation, grading, backfilling, compaction, geotextile fabric, keying in of rip-rap material so as to keep the rock in place through peak drainage flows, and restoration of miscellaneous improvements damaged as a result of completing this item.	
MP217	Divert Water During Construction	ls	Determining locations requiring drainage flow bypass to perform the Work, preparation of and submission of flow bypass plan to Engineer for review and approval, all required damming, temporary piping, and pumping equipment as required with adequate capacity to bypass peak drainage flows, fuel, power, safety measures for the general public, protection measures for all equipment, and notification to and coordination with affected property owners/businesses.	
MP500	Clear and Grub Site	ls	Clearing and grubbing of area as shown on the Drawings. Includes removal and lawful disposal of vegetation and organic material including sod, weeds, grasses, bushes, stumps, shrubs and trees including the root ball; dust control, removal, haul and disposal of any garbage and debris.	<i>All required tree removal is included in this item.</i>
MP502	Excavation	ls	Site excavation to grade as shown on the Drawings. No classification of excavated materials shall be made, and excavation shall include the removal and subsequent handling of all water, earth, shale, loose or cemented gravel, loose rock, solid rock, or other materials of whatever nature excavated or otherwise removed in the performance of the work. Includes grade controls, excavation, stockpiling, loading, and hauling of on-site materials; grading to subgrade or final elevations, embankment construction per details and notes, compaction, and dust control.	<i>See Bidding Schedule and/or Drawings for gross cut and fill quantity estimates.</i>
MP503	Remove Excess Material	cy	Removal and disposal of excess material. No classification of excavated materials shall be made. Includes loading and unloading, hauling, stockpiling, lawful disposal of excavated materials, and disposal fees.	
MP512	Erosion Control Blanket	sy	Installation of new slope protection blanket per APWA 31 25 00 and as listed in the Bidding Schedule and shown on the Drawings. Includes measuring, cutting, fitting, anchoring, and required fabric overlaps.	<i>No additional payment will be given for fabric overlaps. Payment based on total ground area covered.</i>

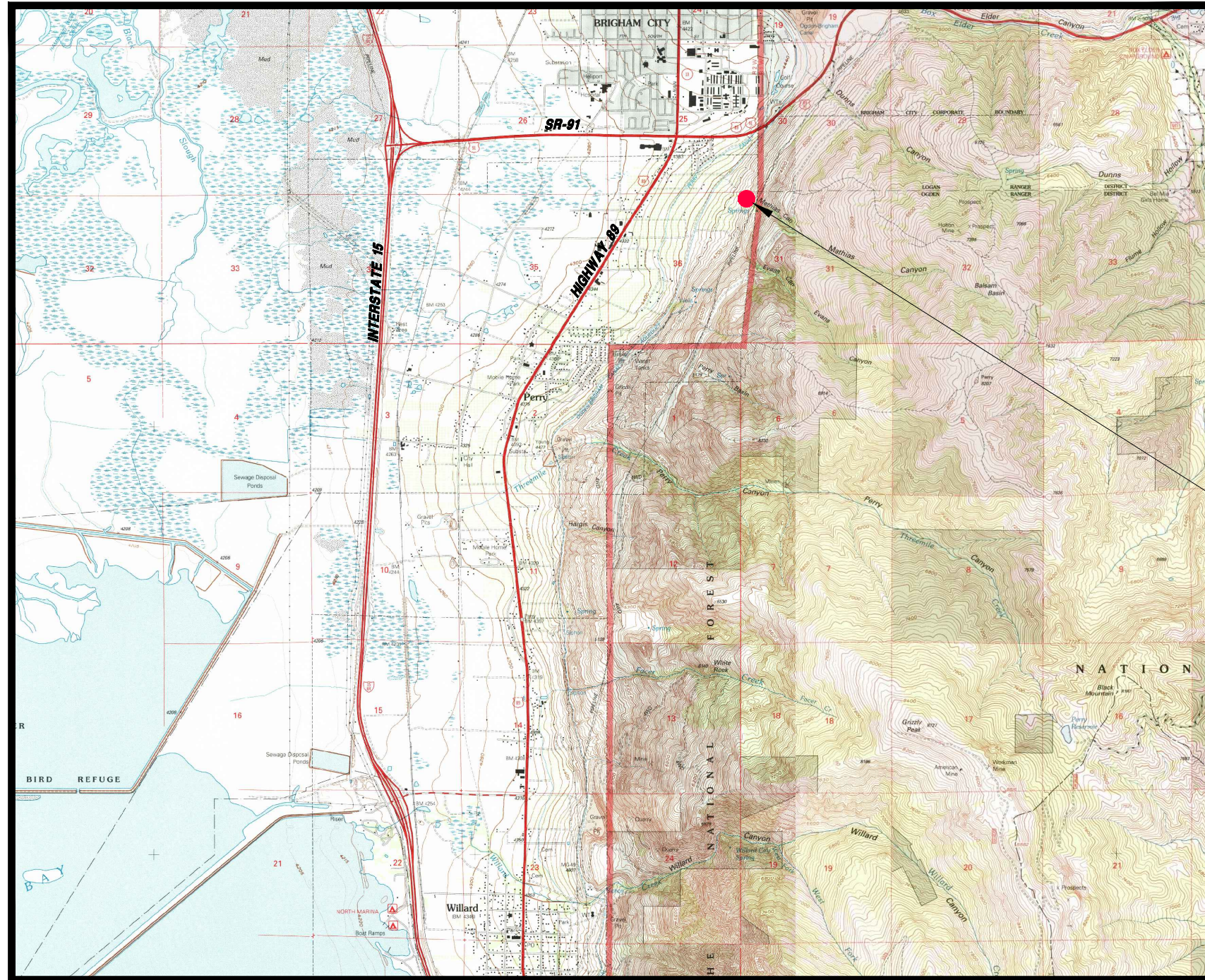
MEASUREMENT AND PAYMENT

MP520a	Widen and Grade Existing Road	lf	Grading of the areas identified in the Drawings. Includes widening existing road, grade controls, grading, compaction, and dust control.	<i>See Bidding Schedule and/or Drawings for quantity estimates.</i>
MP615	Furnish and install reinforced geotextile fabric for spillway	ea	Installation of new geotextile fabric and/or geogrid as listed in the Bidding Schedule and shown on the Drawings. Includes measuring, cutting, fitting, anchoring, and required fabric overlaps.	<i>No additional payment will be given for fabric overlaps. Payment based on total ground area covered.</i> <i>Install Mirafi TM14S HPTRM or approved equal (such as Pyramat 50) including anchor pins per Manufacturer's recommendations</i>
MP617	Untreated Base Course (UTBC)	ton	Importing and placement of untreated base course to the thicknesses listed in the Bidding Schedule and shown on the Drawings. Includes loading and unloading, hauling, stockpiling, grade controls, rough and fine grading, rolling, compaction, and dust control.	
MP650a	Furnish and install concrete anchor wall	ea	Installation and placement of structural concrete anchor walls as listed in the Bidding Schedule and shown on the Drawings. Includes excavation, dewatering, foundation material, grade control, forming, steel reinforcement, protection of concrete while curing, backfill, and compaction.	
MP706u	Re-Seed with Native Seed Mix	sy	Seed mixture, hand raking or drilling the seed into properly prepared soil, and watering of seed until germinated and established.	

END OF SECTION

Perry Flood Control District MATHIAS CANYON DEBRIS BASIN IMPROVEMENTS

APRIL 2024



PROJECT VICINITY MAP

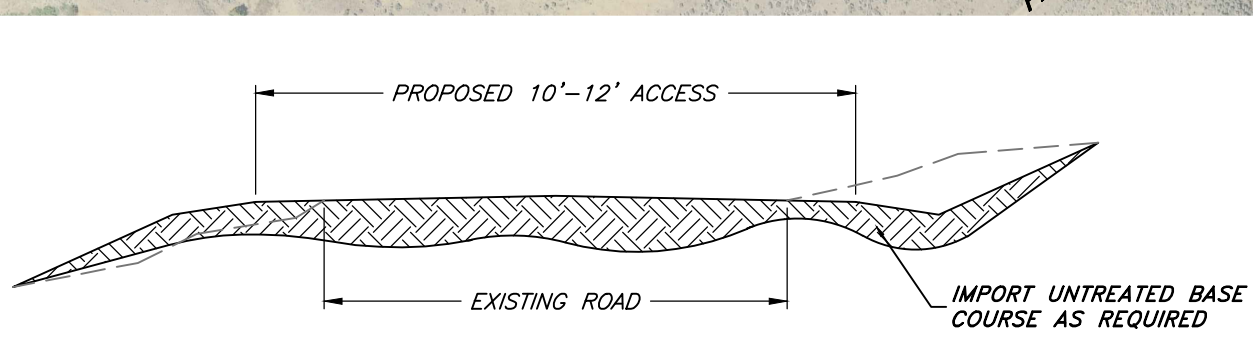
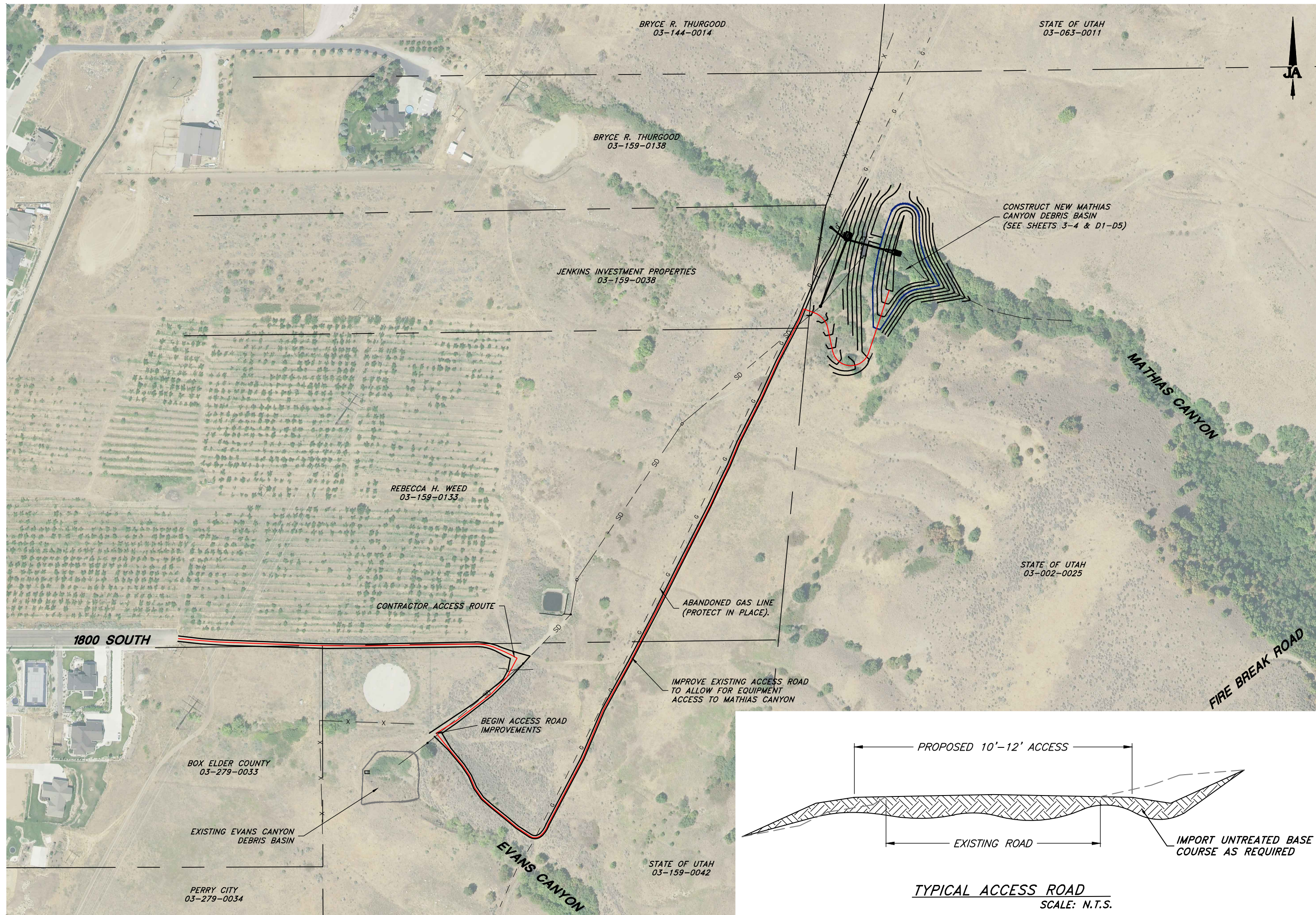
Index

- 1 COVER SHEET
- 2 LOCATION AND ACCESS PLAN
- 3 MATHIAS CANYON SITE PLAN
- 4 PLAN AND PROFILE
- D1 CONTROL STRUCTURES
- D2 INLET STRUCTURE
- D3 INLET STRUCTURE FRAME & GRATES
- D4 CONTROL STRUCTURE
- D5 CONTROL STRUCTURE FRAME & GRATES
- 10 **MATHIAS CREEK PIPING**

Project Location



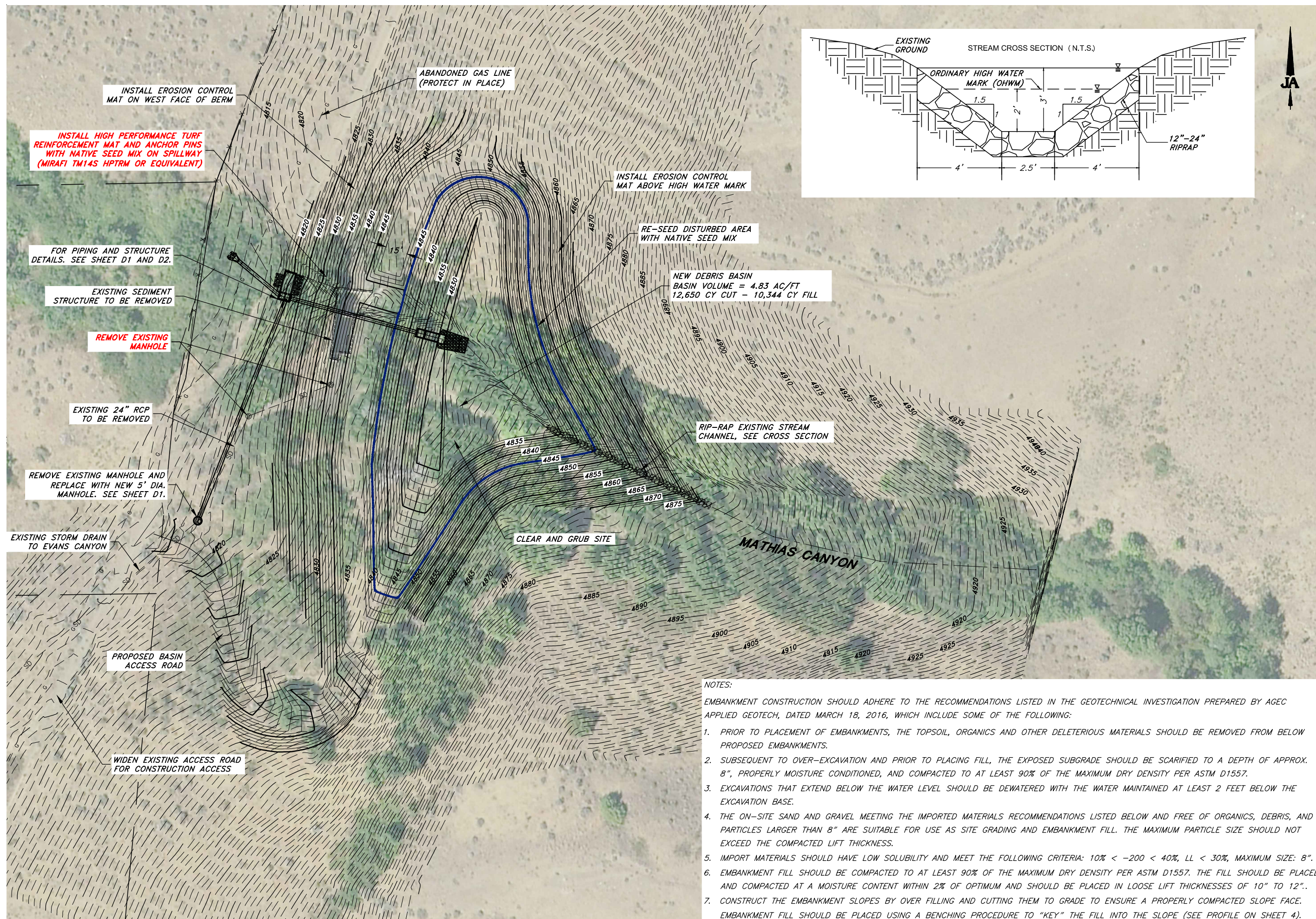
CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403
(801) 476-9767



TYPICAL ACCESS ROAD
SCALE: N.T.S.

REV.	DATE	APPR.

SCALE: 24" X 36" H:1"=100'	SCALE: 11" X 17" H:1"=200'
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MLR CHECKED	MLR CHECKED
SHEET: 2	
OF 9 SHEETS	

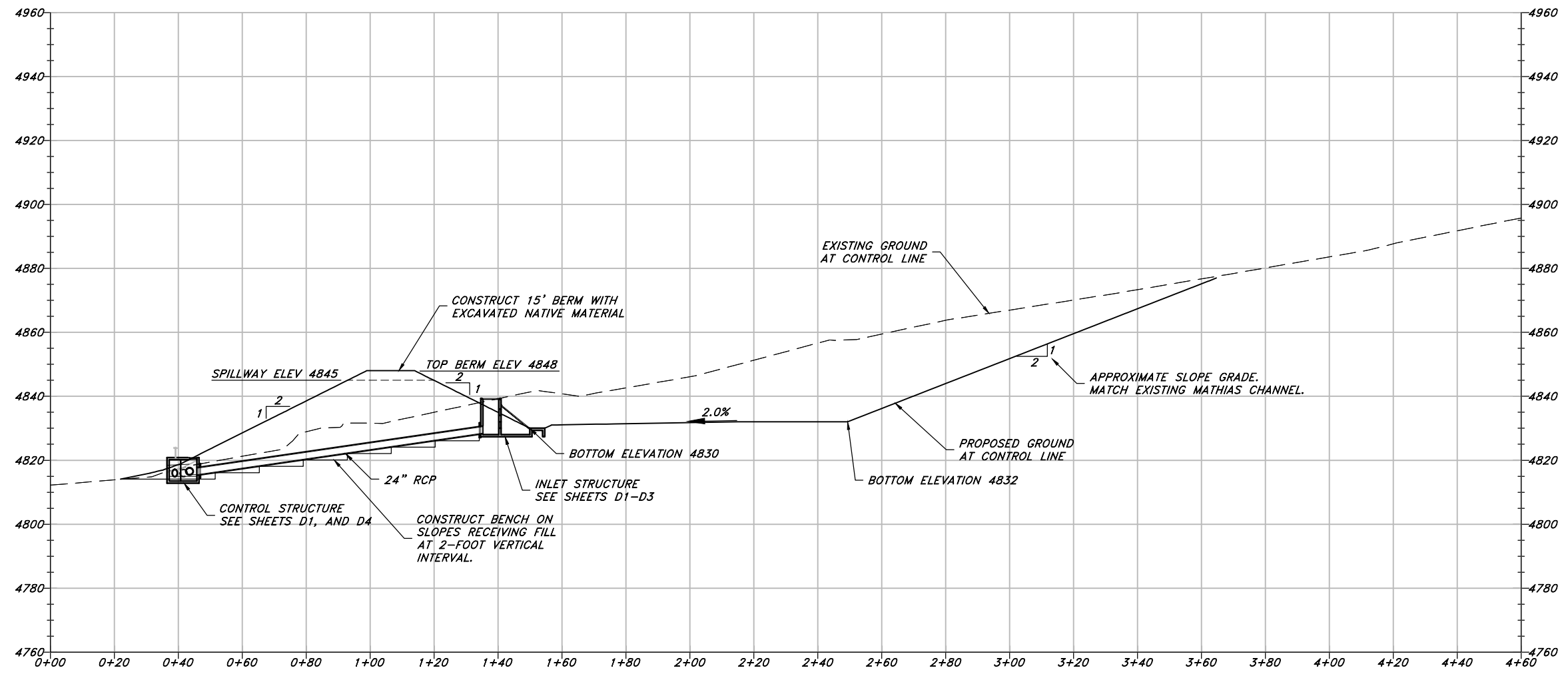
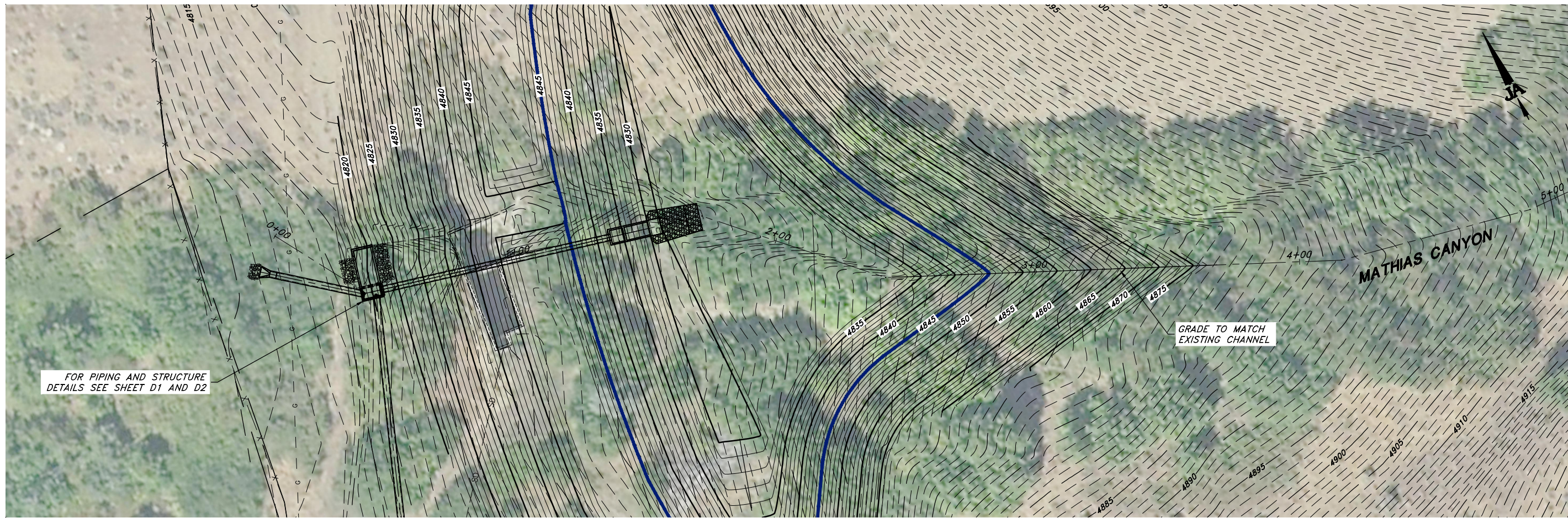


04/08/24 MLR MH AND SD REMOVAL REVISION, SPILLWAY FABRIC CLARIFICATION

REV.	DATE	APPR.

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SCALE: 24"x36" H:1"=30'	11"x17" H:1"=60'	
SHEET: 3		
OF 9 SHEETS		

- NOTES:**
- EMBANKMENT CONSTRUCTION SHOULD ADHERE TO THE RECOMMENDATIONS LISTED IN THE GEOTECHNICAL INVESTIGATION PREPARED BY AGECE APPLIED GEOTECH, DATED MARCH 18, 2016, WHICH INCLUDE SOME OF THE FOLLOWING:
1. PRIOR TO PLACEMENT OF EMBANKMENTS, THE TOPSOIL, ORGANICS AND OTHER DELETERIOUS MATERIALS SHOULD BE REMOVED FROM BELOW PROPOSED EMBANKMENTS.
 2. SUBSEQUENT TO OVER-EXCAVATION AND PRIOR TO PLACING FILL, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF APPROX. 8", PROPERLY MOISTURE CONDITIONED, AND COMPACTED TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
 3. EXCAVATIONS THAT EXTEND BELOW THE WATER LEVEL SHOULD BE DEWATERED WITH THE WATER MAINTAINED AT LEAST 2 FEET BELOW THE EXCAVATION BASE.
 4. THE ON-SITE SAND AND GRAVEL MEETING THE IMPORTED MATERIALS RECOMMENDATIONS LISTED BELOW AND FREE OF ORGANICS, DEBRIS, AND PARTICLES LARGER THAN 8" ARE SUITABLE FOR USE AS SITE GRADING AND EMBANKMENT FILL. THE MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED THE COMPACTED LIFT THICKNESS.
 5. IMPORT MATERIALS SHOULD HAVE LOW SOLUBILITY AND MEET THE FOLLOWING CRITERIA: 10% < -200 < 40%, LL < 30%, MAXIMUM SIZE: 8".
 6. EMBANKMENT FILL SHOULD BE COMPACTED TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY PER ASTM D1557. THE FILL SHOULD BE PLACED AND COMPACTED AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND SHOULD BE PLACED IN LOOSE LIFT THICKNESSES OF 10" TO 12".
 7. CONSTRUCT THE EMBANKMENT SLOPES BY OVER FILLING AND CUTTING THEM TO GRADE TO ENSURE A PROPERLY COMPACTED SLOPE FACE. EMBANKMENT FILL SHOULD BE PLACED USING A BENCHING PROCEDURE TO "KEY" THE FILL INTO THE SLOPE (SEE PROFILE ON SHEET 4).

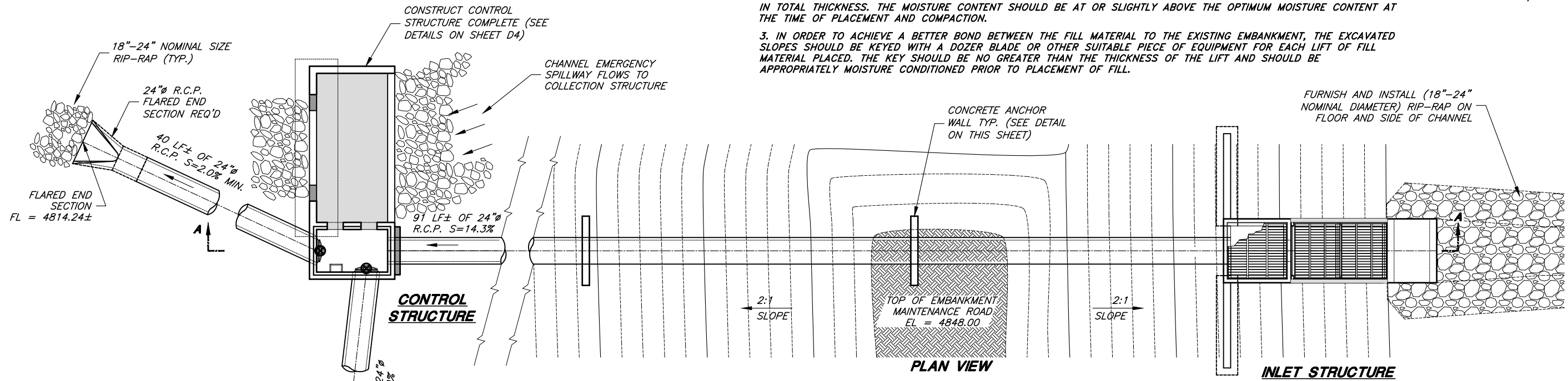


REV.	DATE	APPR.

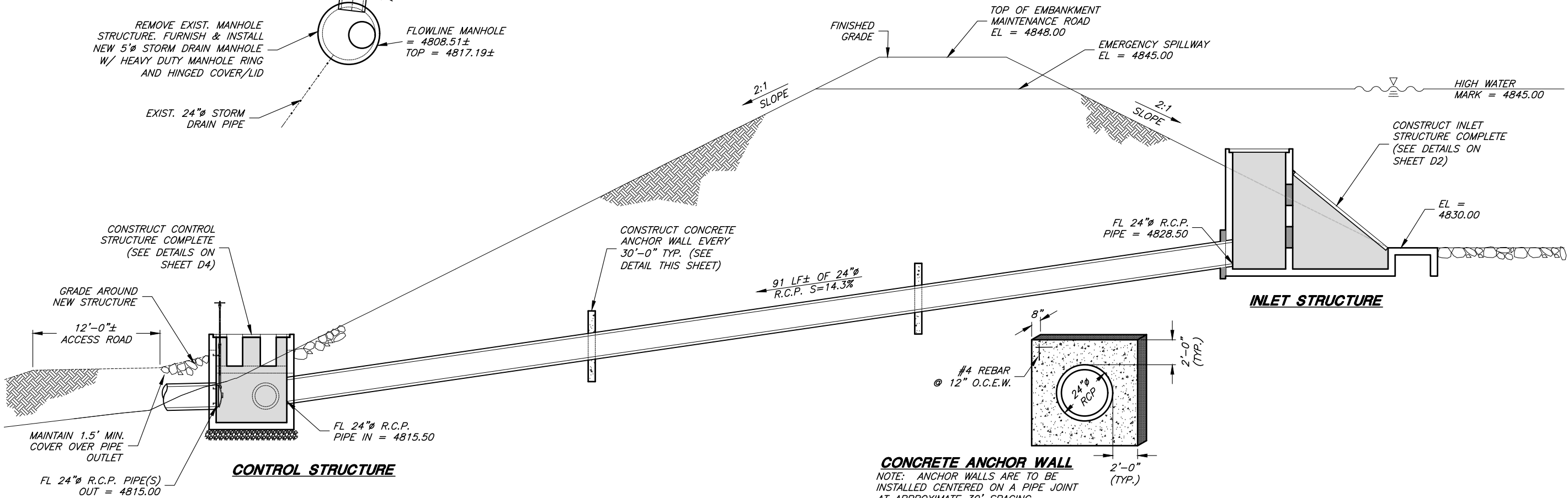
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24" x 36"			
H:1"=20'			
11" x 17"			
H:1"=40'			
11" x 40"			

NOTES:

1. EMBANKMENT FILL SHALL CONSIST OF RE-WORKED ON-SITE SANDY AND GRAVELLY SOILS WITH PARTICLES LARGER THAN 4 INCHES IN DIAMETER REMOVED OR AN IMPORTED MATERIAL.
2. ALL FILL MATERIAL SHOULD BE PLACED IN 6-INCH LOOSE LIFTS IF COMPACTED BY SMALL, HAND-OPERATED EQUIPMENT, 8-INCH LOOSE LIFTS BY LIGHT-DUTY ROLLERS, AND 12-INCH LOOSE LIFTS IF COMPACTED BY HEAVY DUTY COMPACTION EQUIPMENT THAT IS CAPABLE OF EFFICIENTLY COMPACTING THE ENTIRE THICKNESS OF THE LIFT. FILL MATERIAL SHOULD BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY (MDD) AS DETERMINED BY ASTM D-1557 WHERE STRUCTURAL FILL IS LESS THAN 5 FEET AND TO 98% OF THE MDD IN AREAS EXCEEDING FEET 5 FEET IN TOTAL THICKNESS. THE MOISTURE CONTENT SHOULD BE AT OR SLIGHTLY ABOVE THE OPTIMUM MOISTURE CONTENT AT THE TIME OF PLACEMENT AND COMPACTION.
3. IN ORDER TO ACHIEVE A BETTER BOND BETWEEN THE FILL MATERIAL TO THE EXISTING EMBANKMENT, THE EXCAVATED SLOPES SHOULD BE KEYED WITH A DOZER BLADE OR OTHER SUITABLE PIECE OF EQUIPMENT FOR EACH LIFT OF FILL MATERIAL PLACED. THE KEY SHOULD BE NO GREATER THAN THE THICKNESS OF THE LIFT AND SHOULD BE APPROPRIATELY MOISTURE CONDITIONED PRIOR TO PLACEMENT OF FILL.



BASIN CONTROL STRUCTURES



CONCRETE ANCHOR WALL
 NOTE: ANCHOR WALLS ARE TO BE INSTALLED CENTERED ON A PIPE JOINT AT APPROXIMATE 30' SPACING

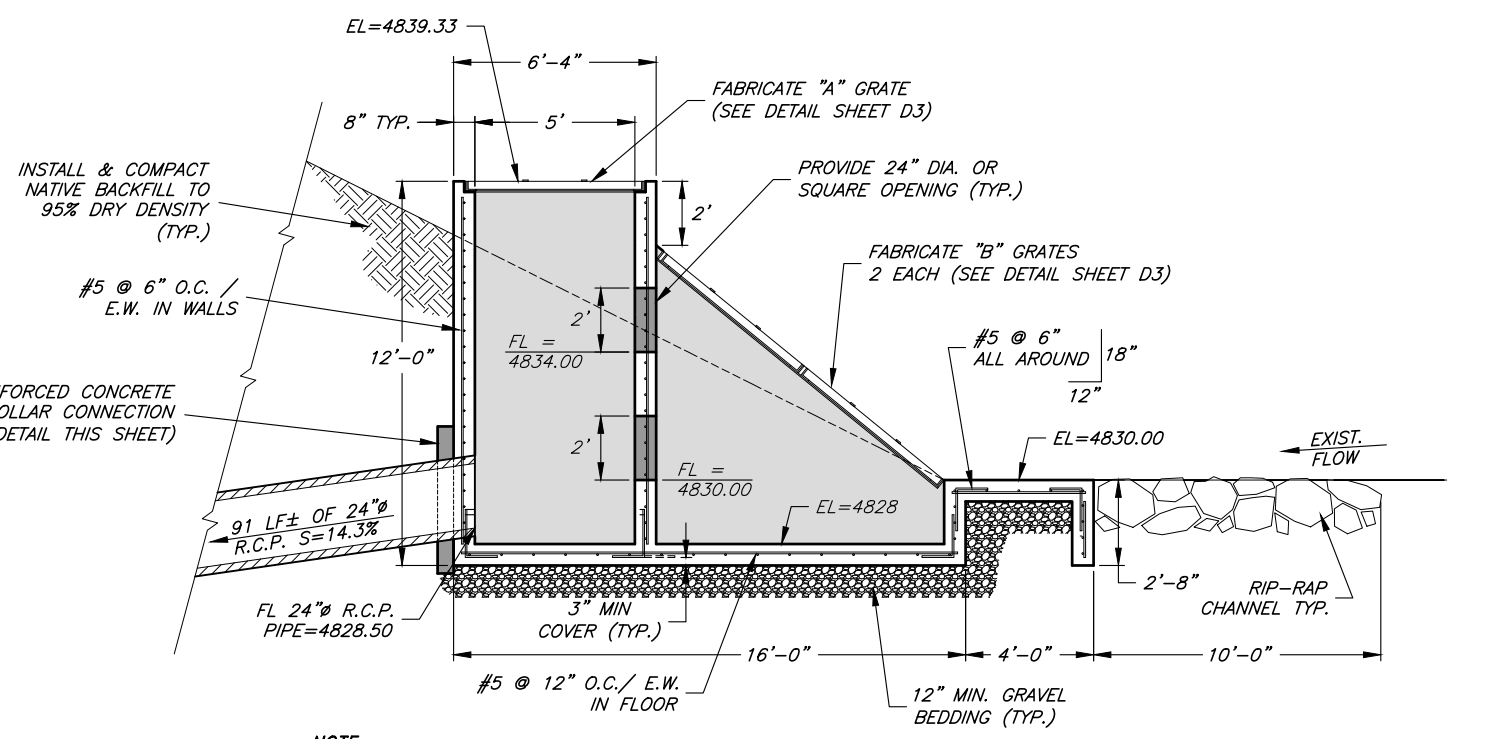
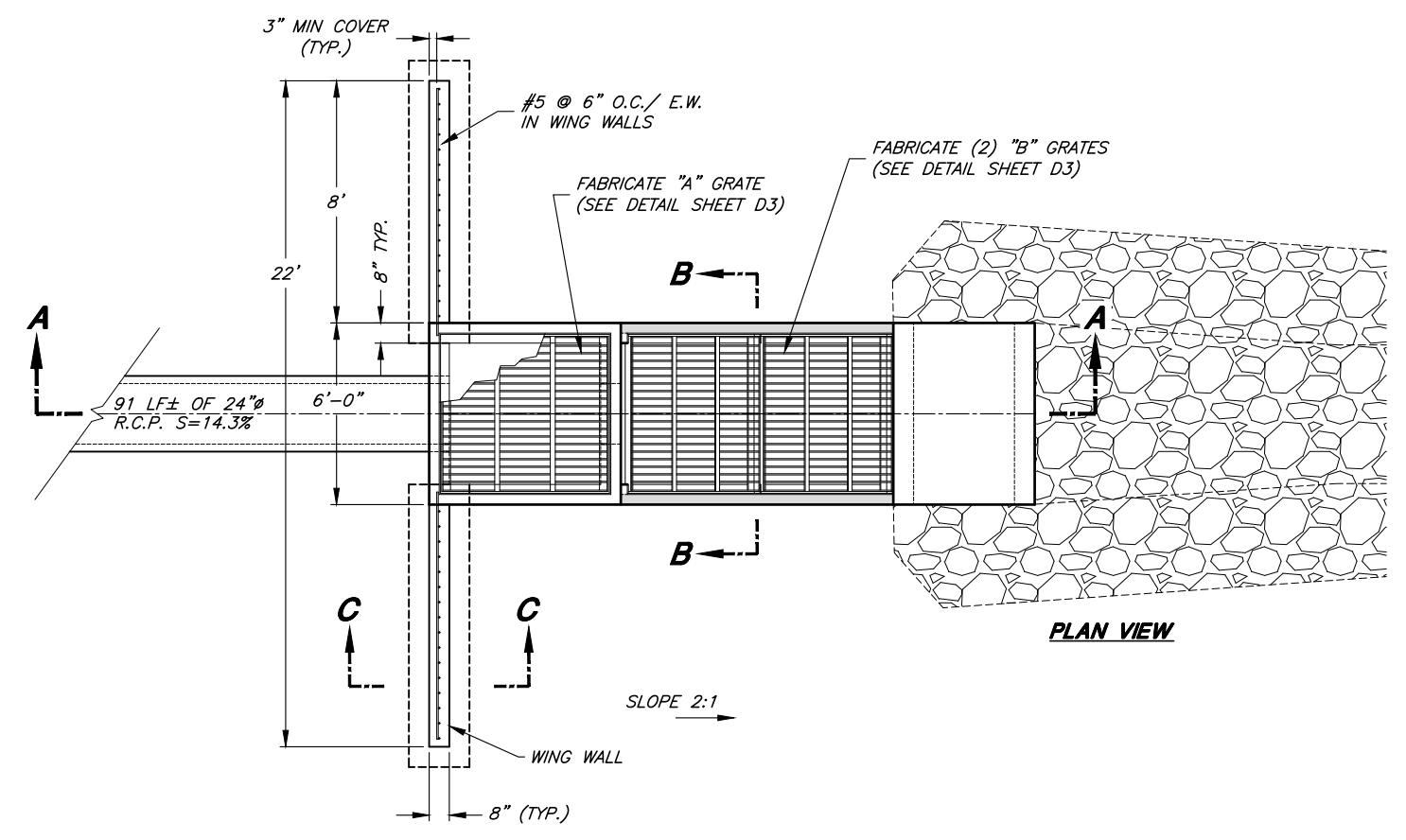
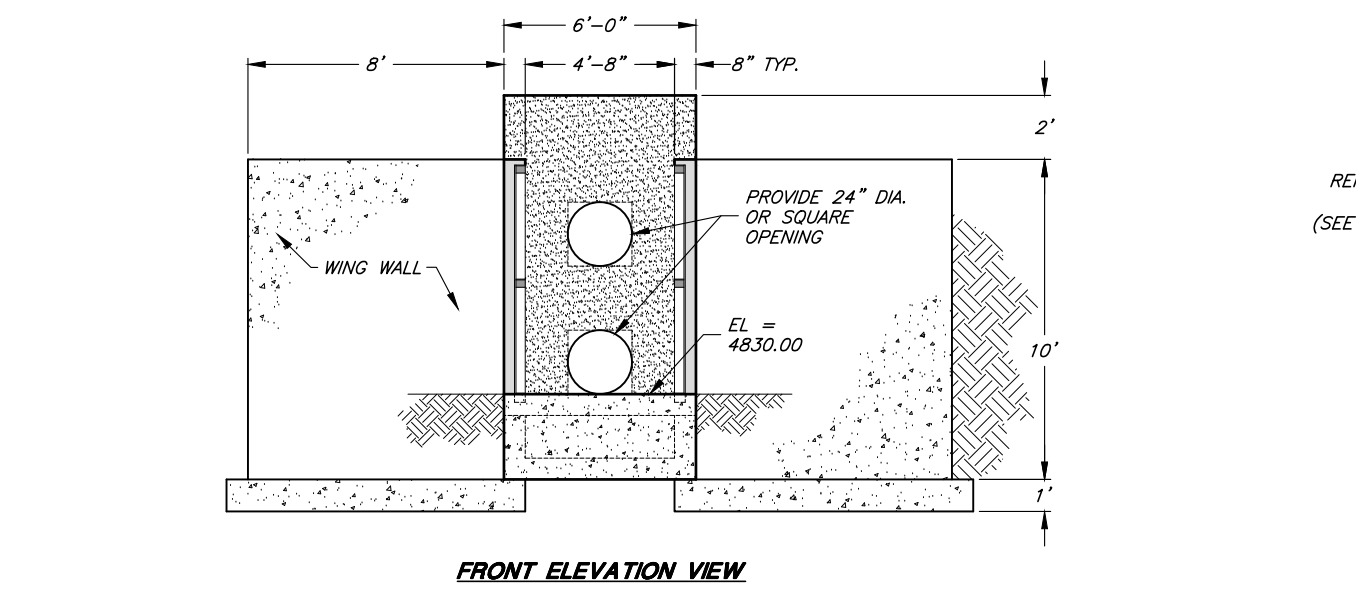
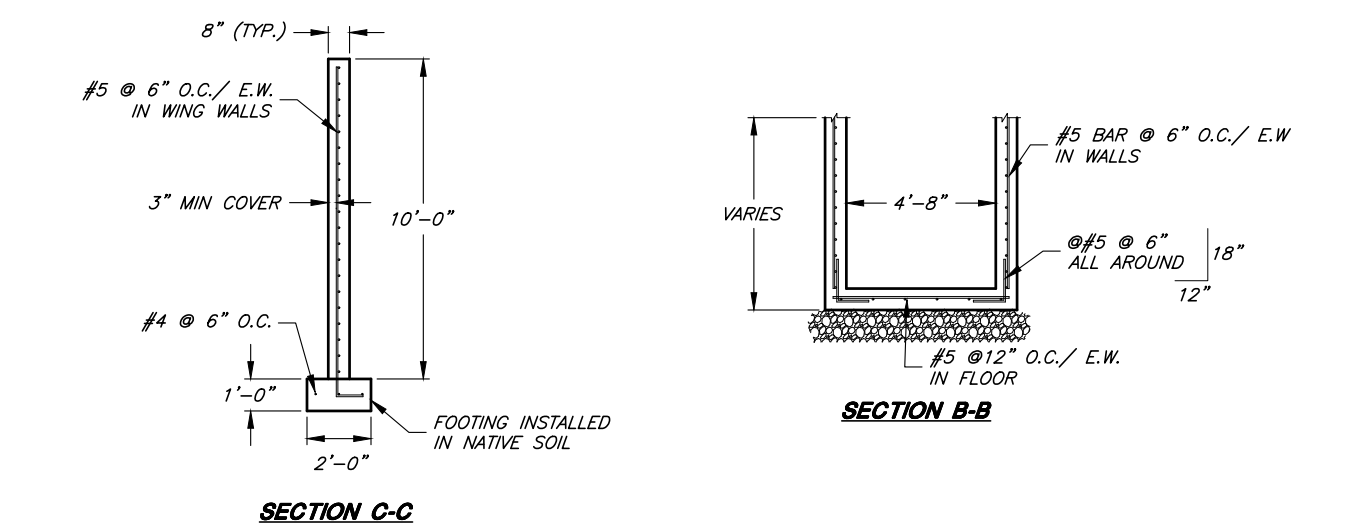
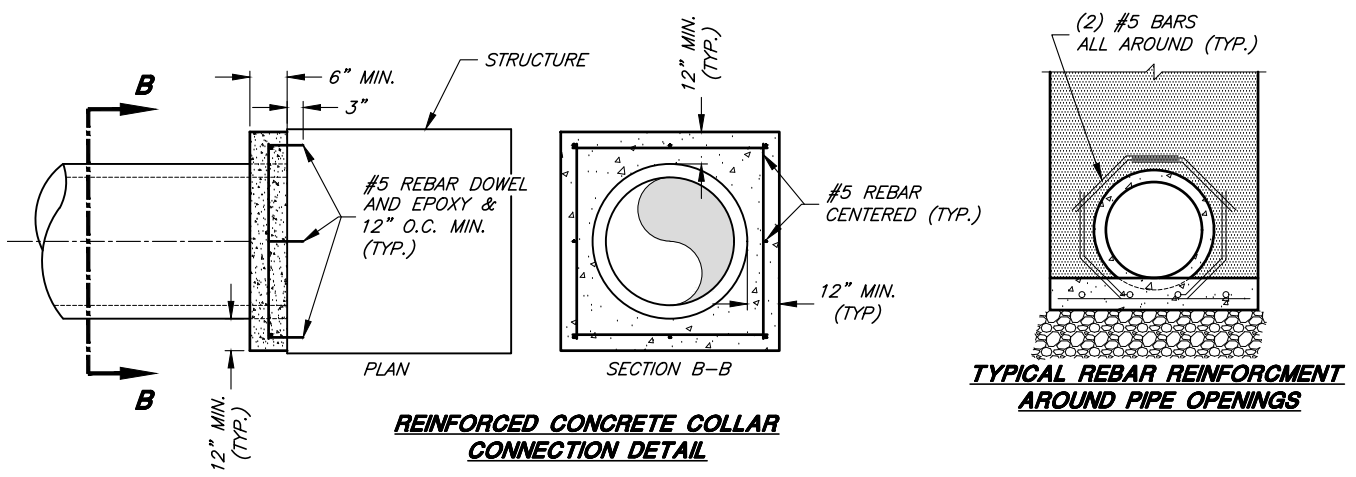
CONSULTING ENGINEERS
 6080 Fashion Point Drive
 South Ogden, Utah 84403
 (801) 476-9767 www.jonescivil.com

PERRY FLOOD CONTROL DISTRICT
EVANS & MATHIAS CANYONS DEBRIS BASINS
MATHIAS BASIN
CONTROL STRUCTURES

REV.	DATE	APPR.

BEB	DESIGNED	BEB	DRAWN	MJR	CHECKED
SCALE:	24" x 36"	N.T.S.	11" x 17"	N.T.S.	

SHEET:
D1
 OF 9 SHEETS



NOTE:
1. ADD REBAR REINFORCEMENT AROUND OPENINGS EQUAL TO REINFORCEMENT DISPLACED BY OPENING.

INLET STRUCTURE

CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403
(801) 476-9767 www.jonescivil.com

**PERRY FLOOD CONTROL DISTRICT
EVANS & MATHIAS CANYONS DEBRIS BASINS**
**MATHIAS BASIN
INLET STRUCTURE**

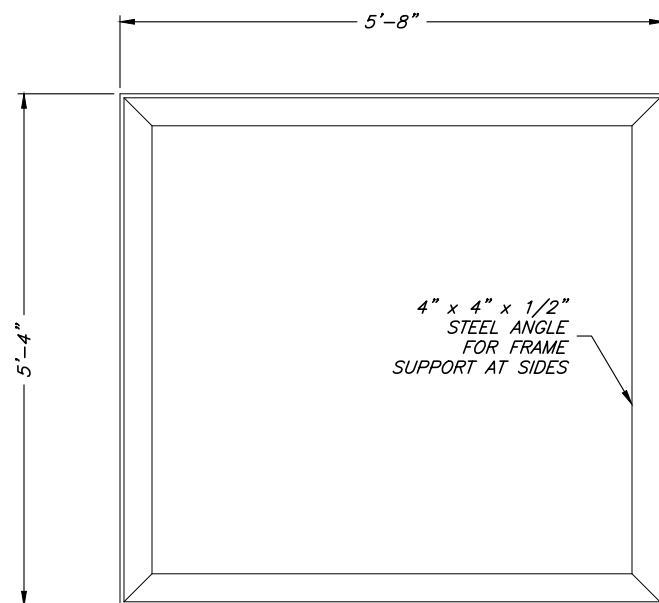
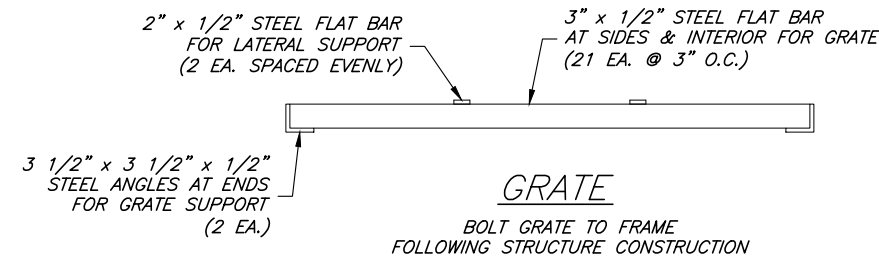
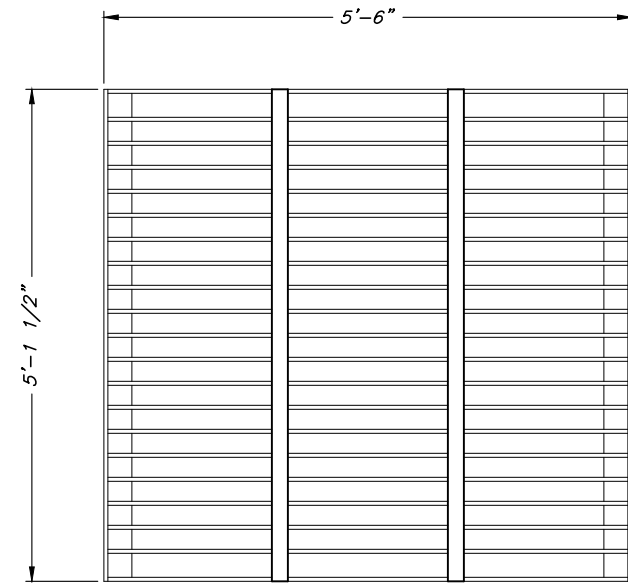
REV.	DATE	APPR.

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N.T.S.				
11"x17"				
N.T.S.				

PERRY FLOOD CONTROL DISTRICT
 EVANS & MATHIAS CANYONS DEBRIS BASINS
**MATHIAS BASIN INLET
 STRUCTURE FRAME & GRATES**

REV.	DATE	APPR.

BEB DESIGNED	BEB DRAWN	MLR CHECKED
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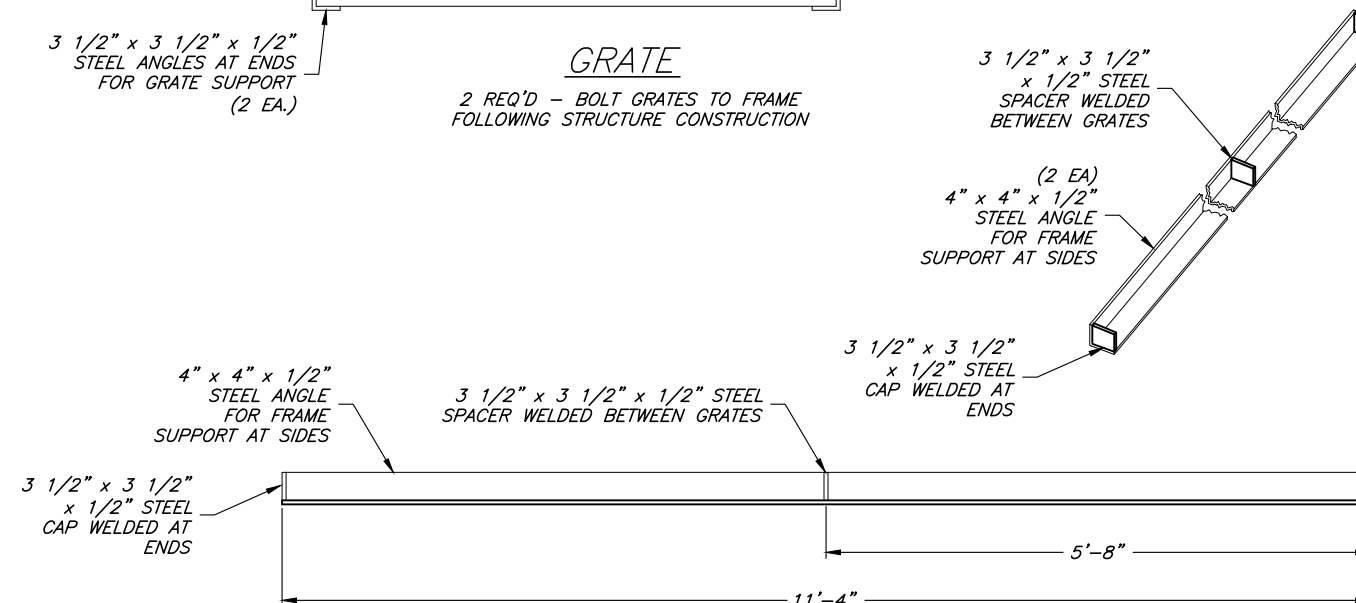
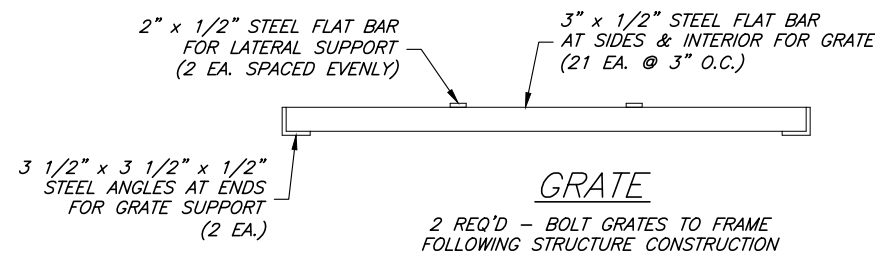
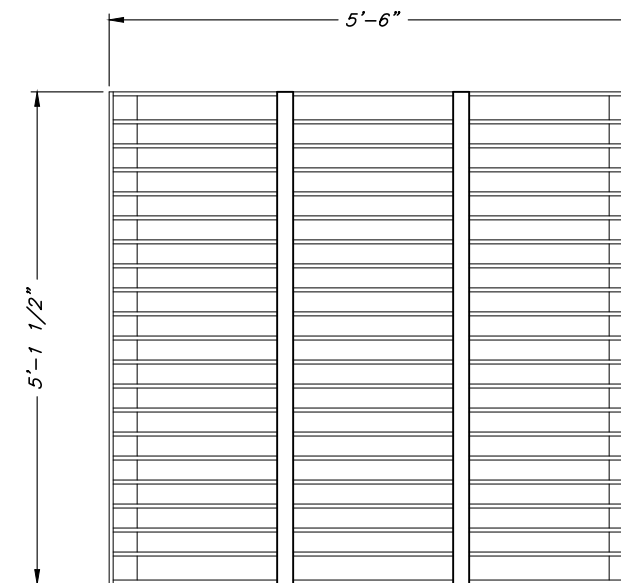


FRAME
 CONSTRUCT AND CAST FRAME
 INTO CONCRETE STRUCTURE

INLET STRUCTURE FRAME & GRATE "A"
 GALVANIZED

GENERAL NOTE:

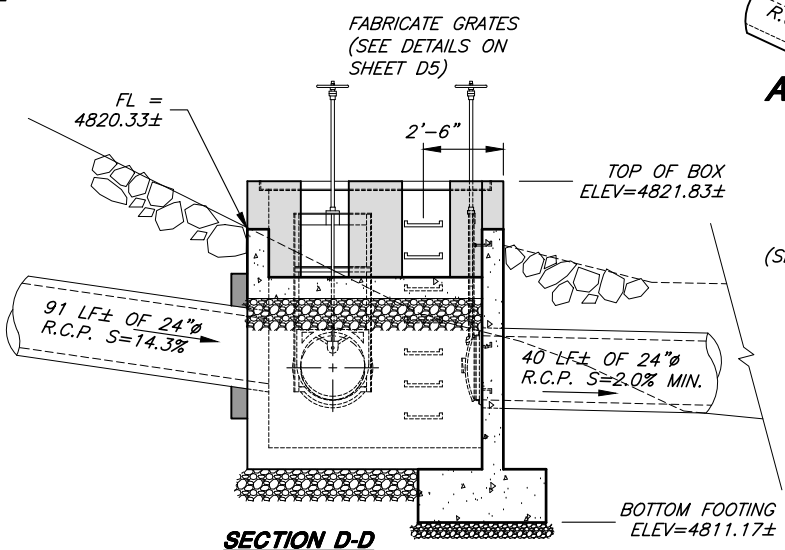
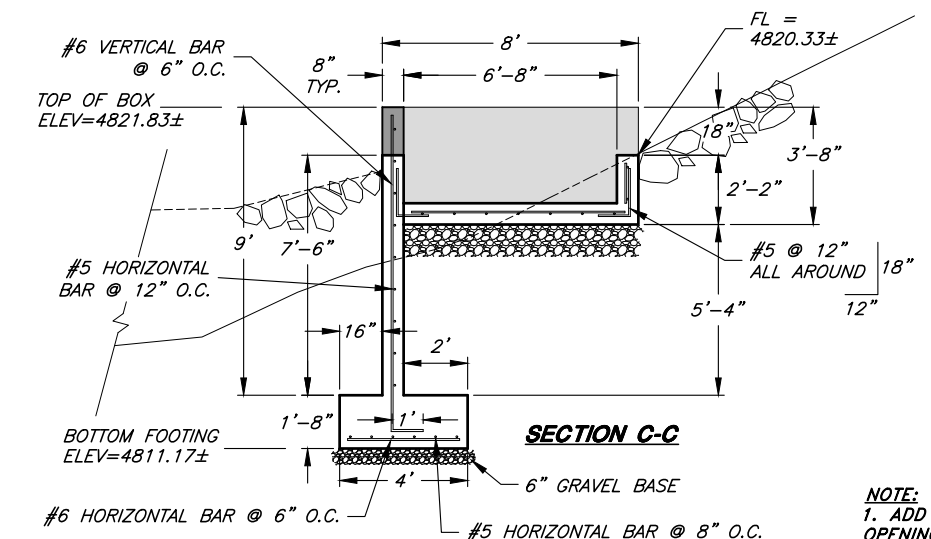
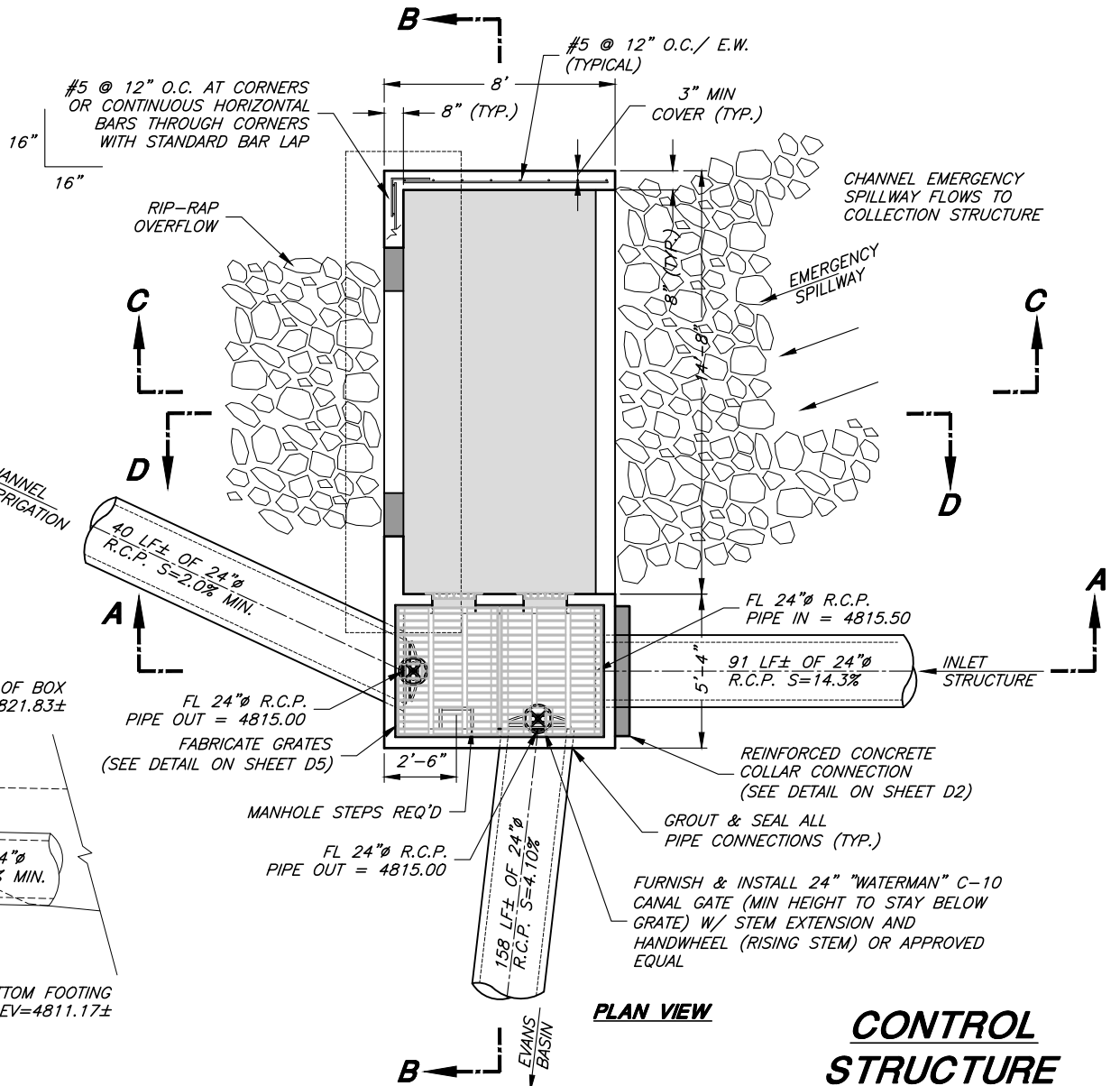
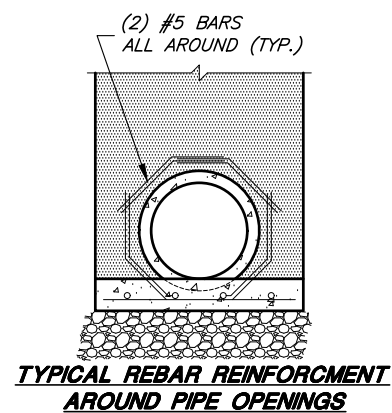
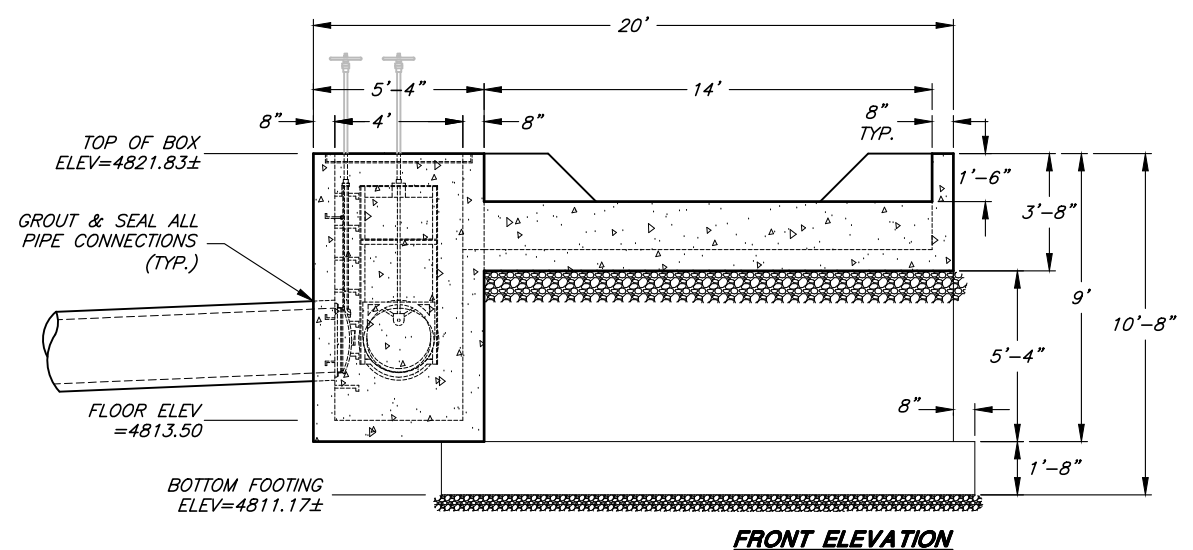
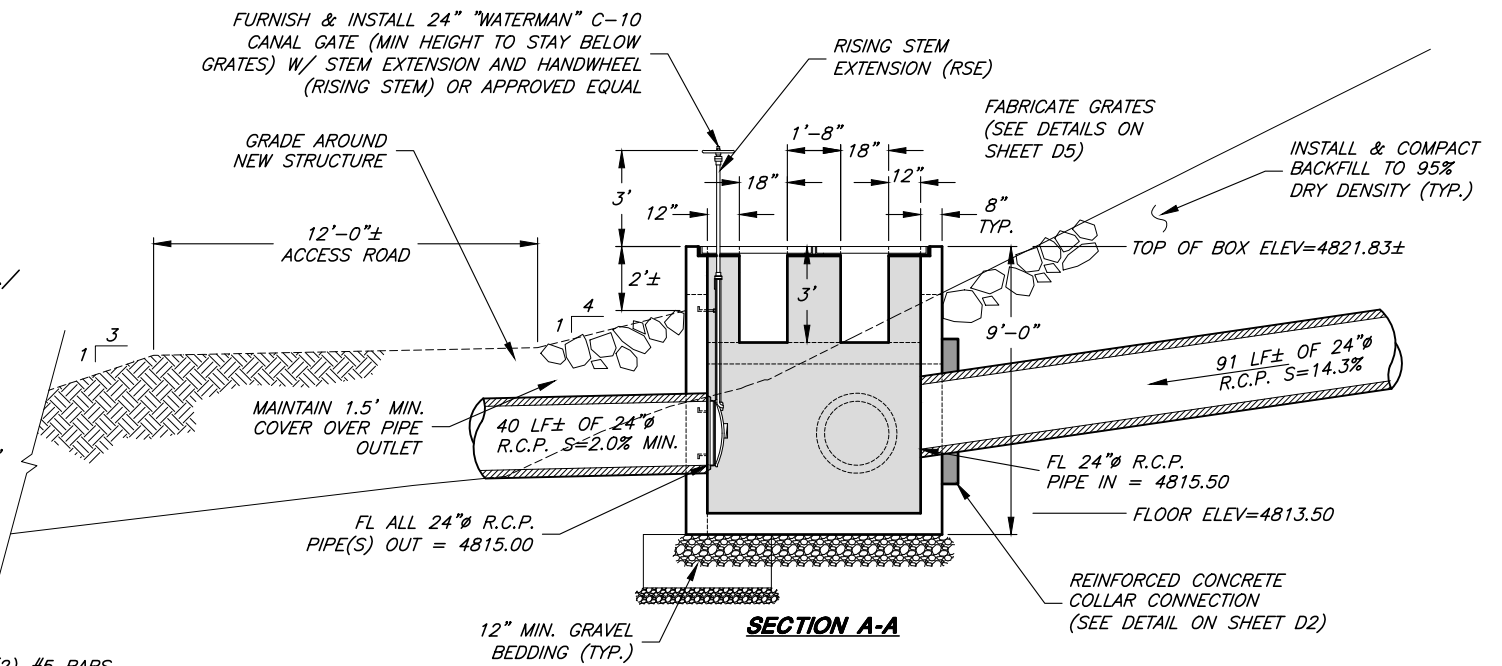
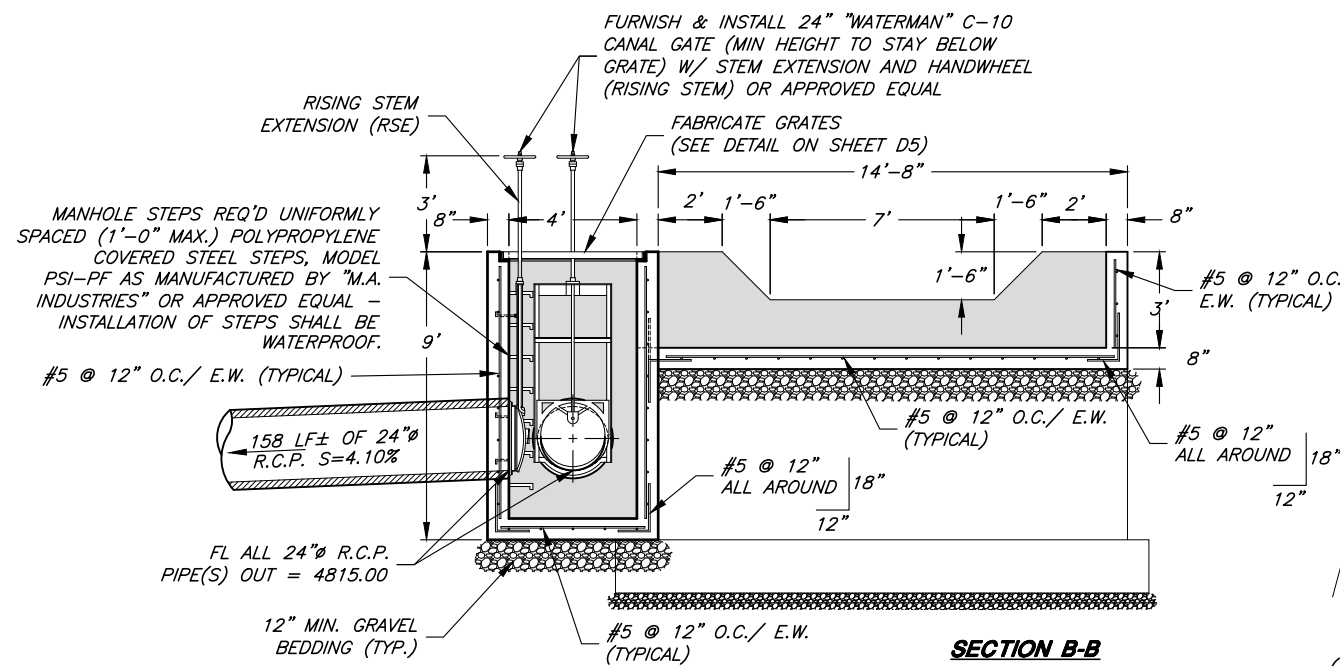
- CONTRACTOR TO VERIFY STRUCTURE DIMENSIONS PRIOR TO FABRICATION OF FRAME AND GRATE. ADJUST GRATE DIMENSIONS IF NECESSARY TO FIT OPENING.



FRAME
 CONSTRUCT 2 SIDES AND
 CAST FRAME INTO CONCRETE STRUCTURE

INLET STRUCTURE FRAME & GRATE "B"
 GALVANIZED

PERRY FLOOD CONTROL DISTRICT
EVANS & MATHIAS CANYONS DEBRIS BASIN
**MATHIAS BASIN
CONTROL STRUCTURE**



NOTE:
1. ADD REBAR REINFORCEMENT AROUND OPENINGS EQUAL TO REINFORCEMENT DISPLACED BY OPENING.

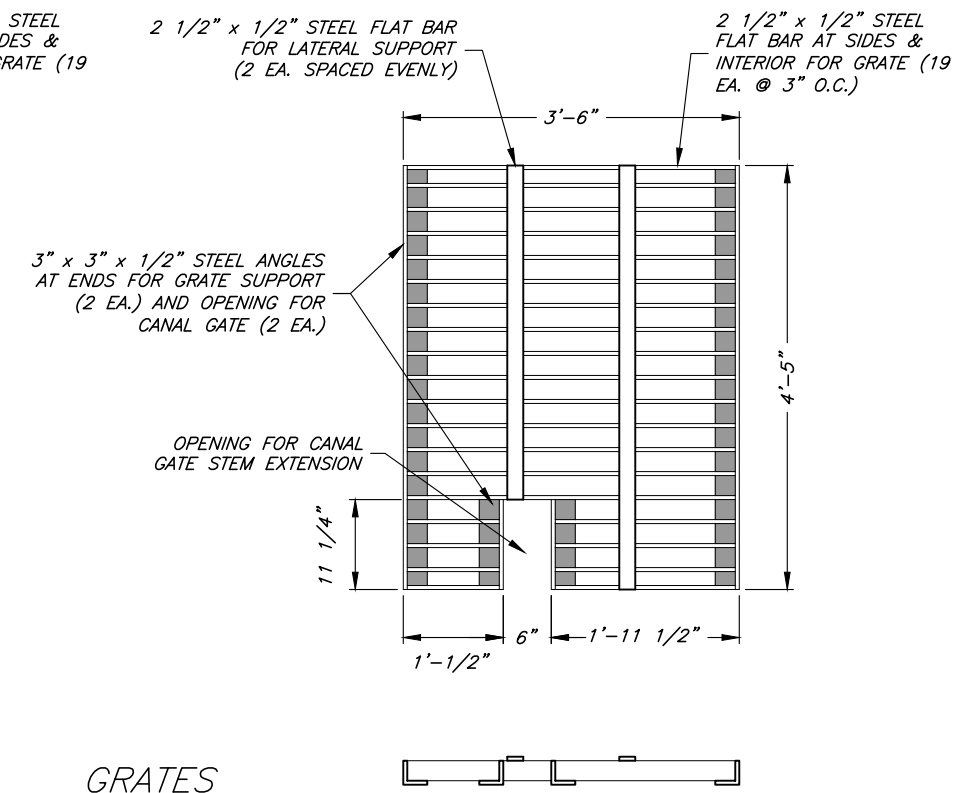
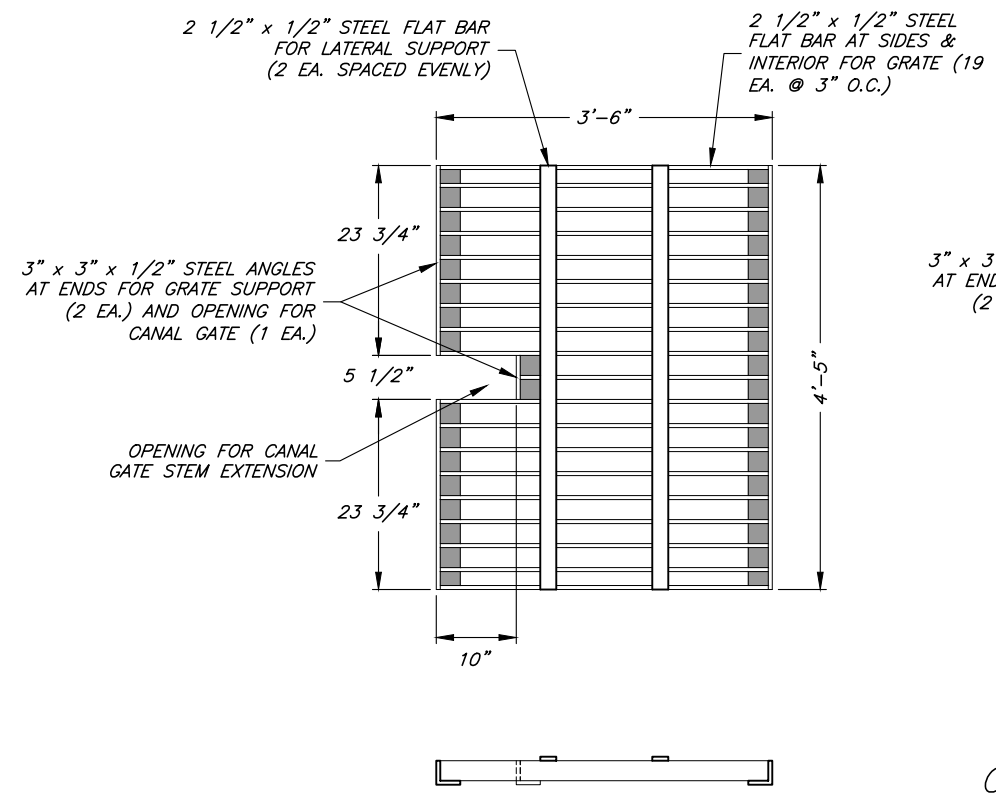
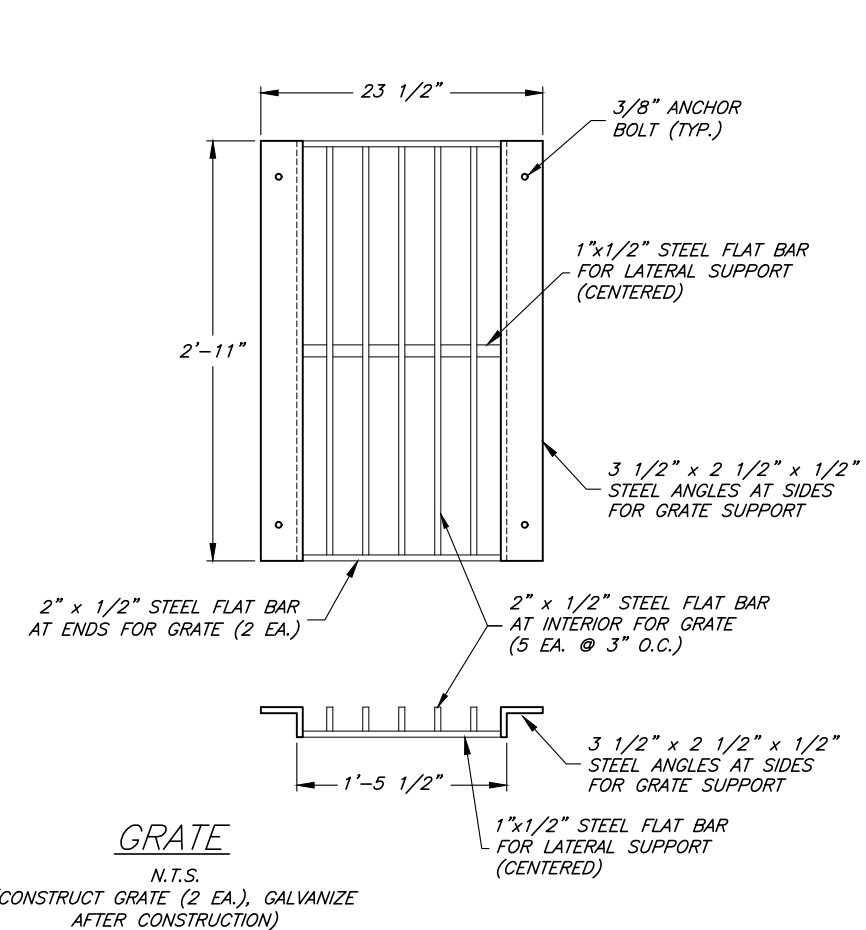
**CONTROL
STRUCTURE**

REV.	DATE	APPR.

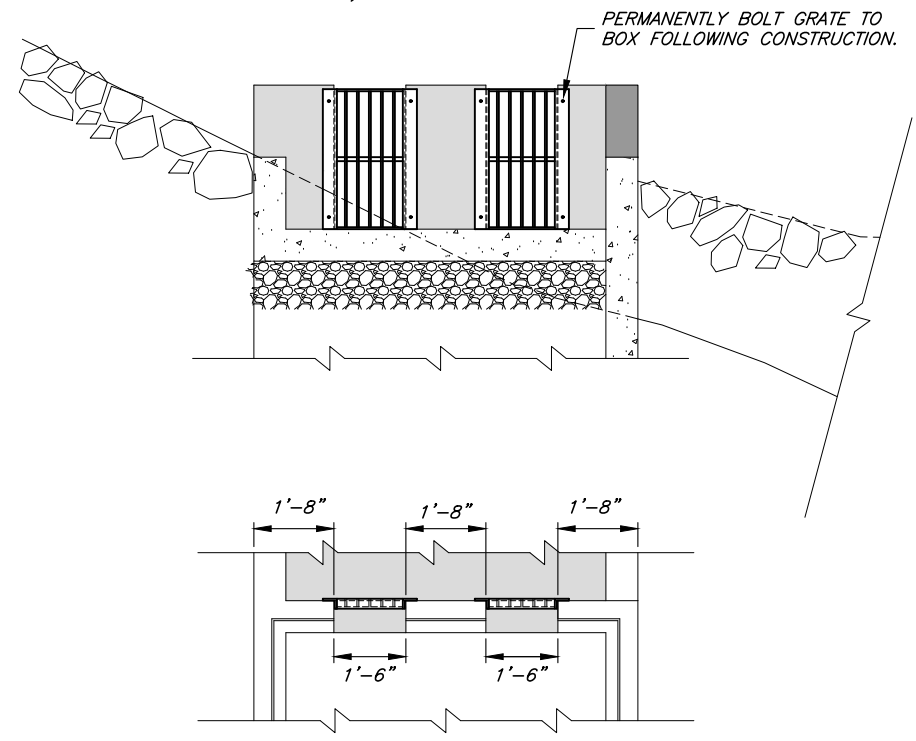
SCALE:	SHEET:
24"x36" N.T.S.	D4
11"x17" N.T.S.	OF 9 SHEETS

REV.	DATE	APPR.

SCALE: 24"x36" N.T.S.	BEB DESIGNED	BEB DRAWN	MLR CHECKED
11"x17" N.T.S.			



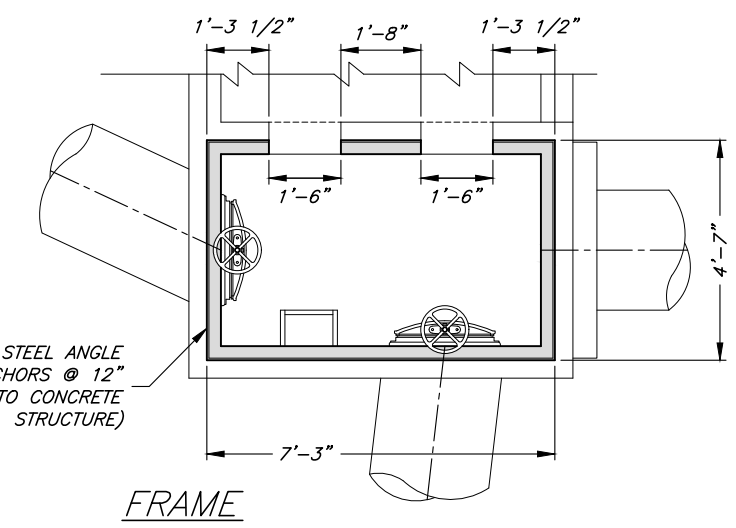
GRATES
 N.T.S.
 (CONSTRUCT GRATE(S), GALVANIZE AFTER CONSTRUCTION)



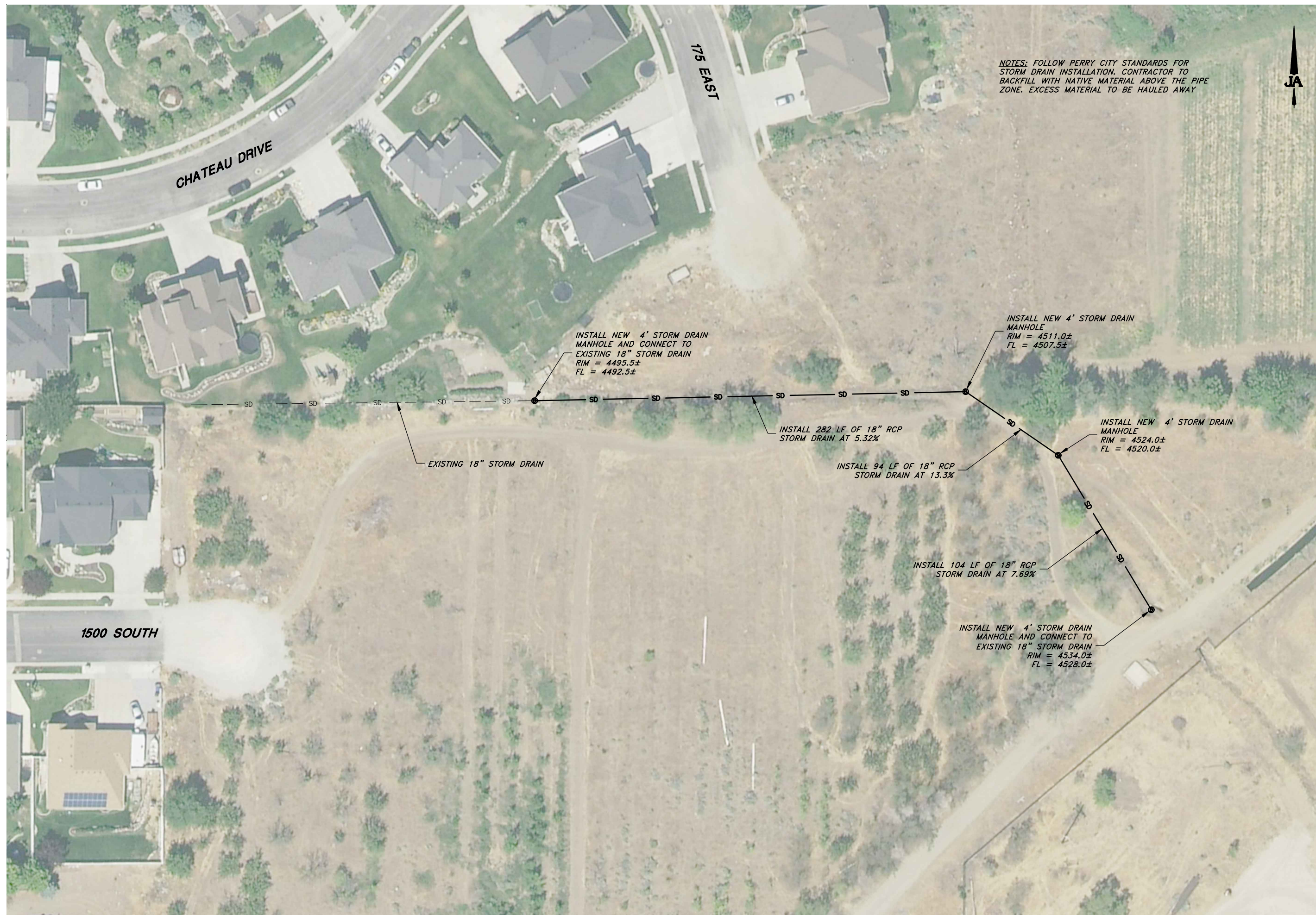
CONTROL STRUCTURE GRATE "B"
 2 REQ'D (GALVANIZED)

CONTROL STRUCTURE FRAME & GRATE(S) "A"
 GALVANIZED

3 1/2" x 3 1/2" x 1/2" STEEL ANGLE FRAME W/ NELSON STUD ANCHORS @ 12" O.C. (CAST FRAME INTO CONCRETE STRUCTURE)



GENERAL NOTE:
 1. CONTRACTOR TO VERIFY STRUCTURE DIMENSIONS PRIOR TO FABRICATION OF FRAME AND GRATE. ADJUST GRATE DIMENSIONS IF NECESSARY TO FIT OPENING.



NOTES: FOLLOW PERRY CITY STANDARDS FOR STORM DRAIN INSTALLATION. CONTRACTOR TO BACKFILL WITH NATIVE MATERIAL ABOVE THE PIPE ZONE. EXCESS MATERIAL TO BE HAULED AWAY



REV.	DATE	APPR.

MLR DESIGNED	BEB DRAWN	MLR CHECKED