

# FOREST LAKES FILING NO. 6

## COUNTY OF EL PASO, STATE OF COLORADO

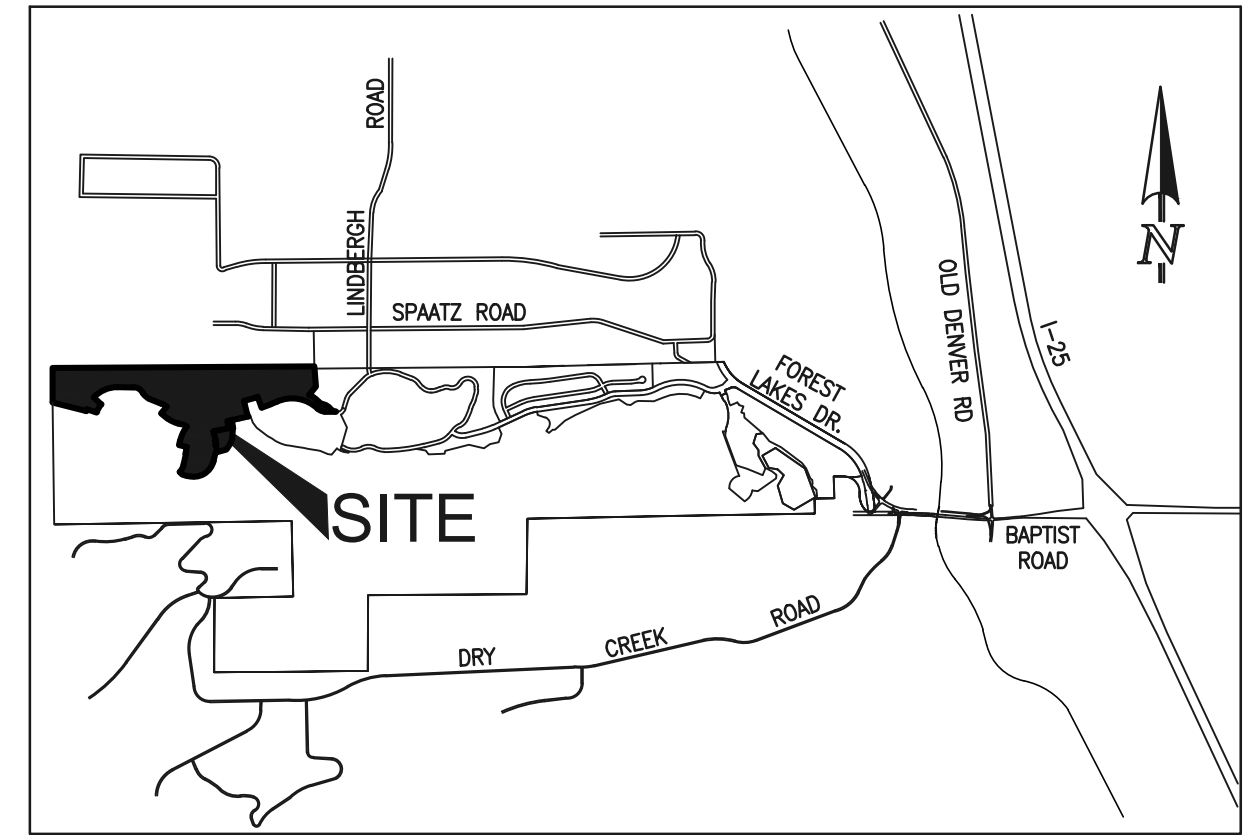
# CONSTRUCTION PLANS

AUGUST 2020

(SECTIONS 27 AND 28, TOWNSHIP 11 SOUTH, RANGE 67 WEST)

PCD Filing No.:  
SF-20-027

EPC STORMWATER REVIEW COMMENTS  
IN ORANGE BOXES WITH BLACK TEXT



VICINITY MAP  
NOT TO SCALE

### GENERAL CONSTRUCTION NOTES:

- THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1987 FOR EXISTING UTILITY LOCATIONS.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD).
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
- ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.

### STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

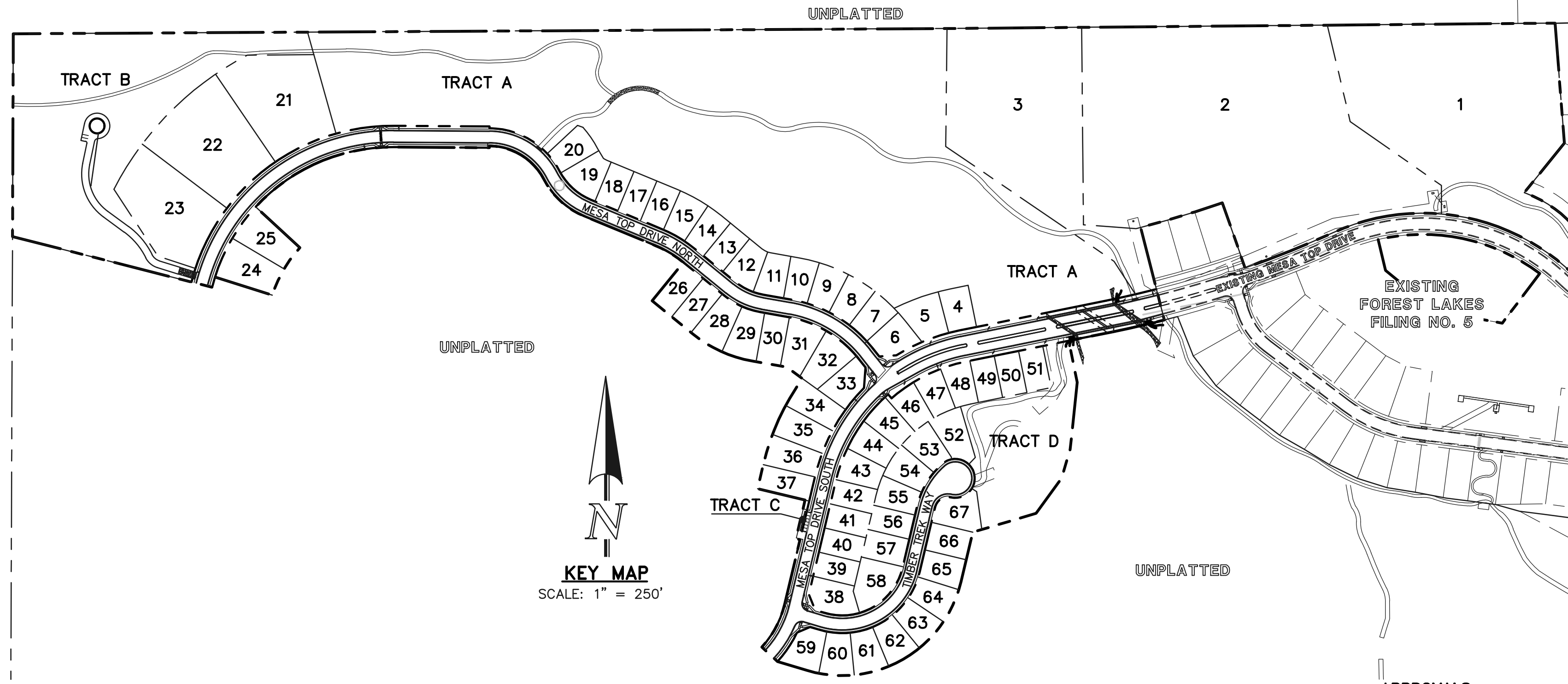
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 911 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- 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 FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

### SIGNING AND STRIPING NOTES:

- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
- ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" UPPER-LOWER CASE LETTERING ON 12" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS."
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

### BENCHMARKS:

- THE SOUTHWESTERLY CORNER OF LOT 15 AS PLATTED IN FOREST LAKES FILING NO. 1 BEING MONUMENTED BY A NO. 4 REBAR AND RED PLASTIC SURVEYORS CAP STAMPED "ROCKWELL PLS 19586" ELEVATION = 7039.42
- THE NORTHEASTERLY CORNER OF LOT 2 AS PLATTED IN FOREST LAKES FILING NO. 1 BEING MONUMENTED BY A NO. 4 REBAR AND RED PLASTIC SURVEYORS CAP STAMPED "ROCKWELL PLS 19586" ELEVATION = 6966.24



### SHEET INDEX

SHEET	DESCRIPTION
SHEET 1 OF 25	TITLE SHEET
SHEET 2 OF 25	GRADING AND EROSION CONTROL PLAN
SHEET 3 OF 25	GRADING AND EROSION CONTROL PLAN
SHEET 4 OF 25	GRADING AND EROSION CONTROL PLAN
SHEET 5 OF 25	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 6 OF 25	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 7 OF 25	KEY MAP WITH TYPICAL STREET SECTIONS
SHEET 8 OF 25	STREET IMPROVEMENT PLAN (MESA TOP DRIVE SOUTH STA: 1+00-15+50)
SHEET 9 OF 25	STREET IMPROVEMENT PLAN (MESA TOP DRIVE SOUTH STA: 15+50-END)&(TIMBER TREK WAY)
SHEET 10 OF 25	STREET IMPROVEMENT PLAN (MESA TOP DRIVE NORTH STA: 1+00-9+00)
SHEET 11 OF 25	STREET IMPROVEMENT PLAN (MESA TOP DRIVE NORTH STA: 9+00-END)
SHEET 12 OF 25	PEDESTRIAN RAMP, MAIL KIOSK PARKING & MEDIAN DETAILED GRADING PLAN
SHEET 13 OF 25	STORM SEWER PLAN & PROFILE (MAIN A, MAIN B, & MAIN C)
SHEET 14 OF 25	STORM SEWER PLAN & PROFILE (MAIN D, MAIN E & MAIN F)
SHEET 15 OF 25	STORM SEWER PLAN & PROFILE (MAIN H)
SHEET 16 OF 25	STORM SEWER PLAN & PROFILE (MAIN G, MAIN I, MAIN J, MAIN K & POND OUTFALL)
SHEET 17 OF 25	PRIVATE POND 'B' FULL SPECTRUM DETENTION
SHEET 18 OF 25	MAIN 'A' - 48" IMPACT STRUCTURE
SHEET 19 OF 25	MAIN 'H' - 42" IMPACT STRUCTURE
SHEET 20 OF 25	POND OUTLET BOX - PROFILE VIEW
SHEET 21 OF 25	POND OUTLET BOX AND MICROPOOL DETAILS
SHEET 22 OF 25	OUTLET BOX DETAILS
SHEET 23 OF 25	PRIVATE POND 'B' SPILLWAY DETAILS
SHEET 24 OF 25	DETAIL SHEET
SHEET 25 OF 25	DETAIL SHEET

please add trail ER access road cross section details w/ sign to CDS; also add trails to plat sheets

fire hydrant plan? verify its included

### AGENCIES:

DEVELOPER:	FOREST LAKES RESIDENTIAL DEVELOPMENT, LLC 6385 CORPORATE DRIVE, SUITE 200 COLORADO SPRINGS, CO 80919 MR. JIM BOULTON (719) 592-3259
CIVIL ENGINEER:	CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. KYLE R. CAMPBELL, P.E. (719) 785-0790
COUNTY ENGINEERING:	DEVELOPMENT SERVICES DEPARTMENT 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910 MR. GILBERT LAFORCE, (719) 520-7945
WATER & SANITATION DISTRICT:	FOREST LAKES METROPOLITAN DISTRICT 2 N. CASCADE AVENUE, SUITE 1280 COLORADO SPRINGS, CO 80903 MS. ANN NICHOLS, (719) 633-9500
FIRE DISTRICT:	TRI-LAKES MONUMENT FIRE PROTECTION DISTRICT 166 SECOND STREET MONUMENT, COLORADO 80132 (719) 484-0911
GAS COMPANY:	BLACK HILLS ENERGY 18665 BASE CAMP ROAD, A-7 MONUMENT, CO 80132 (888) 890-5554
ELECTRIC COMPANY:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, COLORADO 80831 (719) 495-2283
TELEPHONE COMPANY:	CENTURY LINK COMMUNICATIONS (LOCATORS) (800)-922-1987 A.T.&T. (LOCATORS) (719) 635-3674

### APPROVALS:

#### DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE LOCAL ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY DIRECTLY CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

KYLE R. CAMPBELL COLORADO P.E. #29794 DATE \_\_\_\_\_  
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

#### OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE EROSION CONTROL PLAN AND AS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

JIM BOULTON DATE \_\_\_\_\_

#### 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 COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2 AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH 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.

JENNIFER IRVINE, P.E. COUNTY ENGINEER / ECM ADMINISTRATOR DATE \_\_\_\_\_

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.		

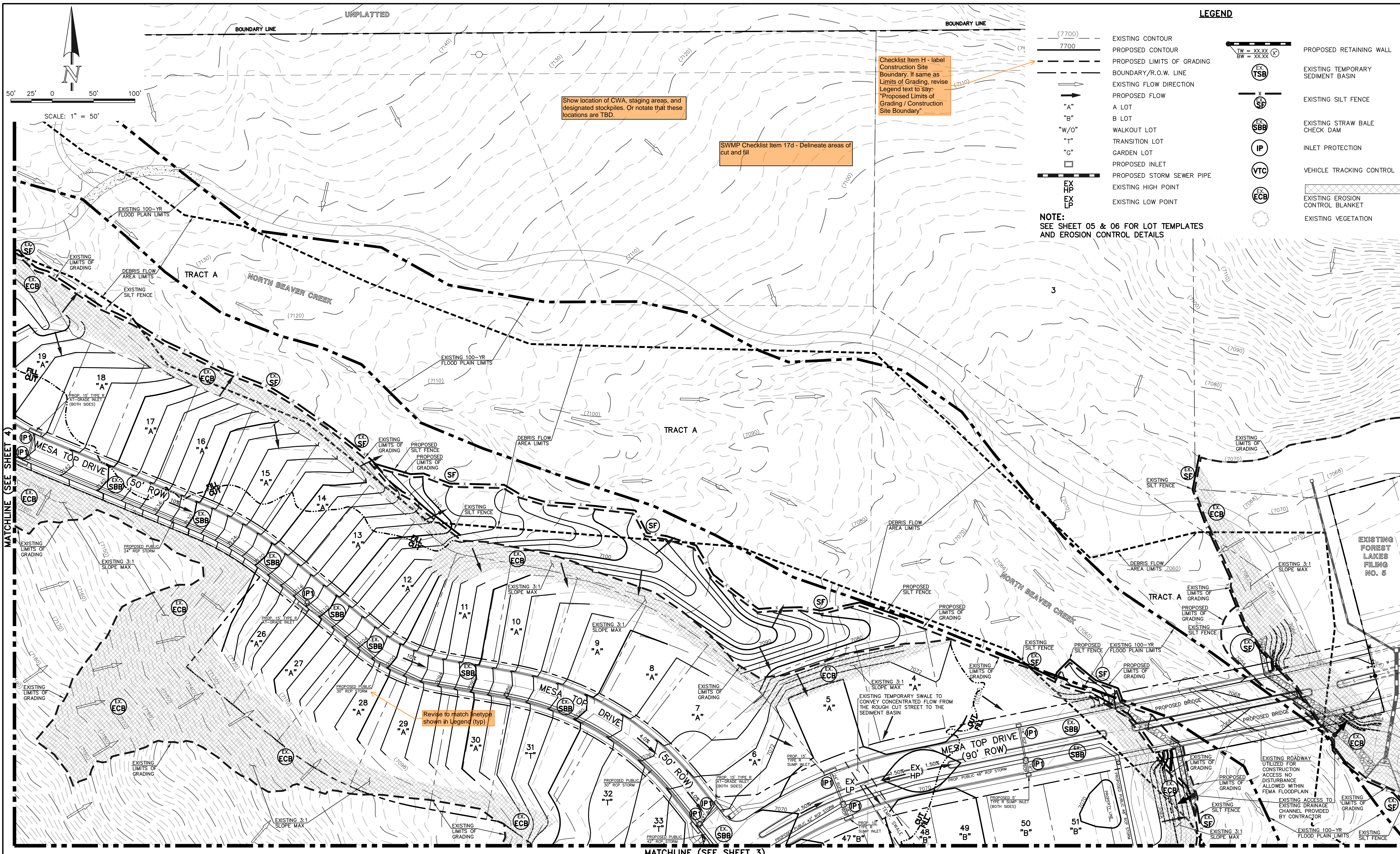
REVIEW:	DATE
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC	
KYLE R. CAMPBELL, COLORADO P.E. #29794	DATE

619 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719) 785-0790  
(719) 785-0799 (fax)

FOREST LAKES FILING NO. 6 CONSTRUCTION PLANS TITLE SHEET			
DESIGNED BY	MAL	SCALE	DATE 08/04/2020
DRAWN BY	MES	(H) 1" = N/A	SHEET 1 OF 25
CHECKED BY		(V) 1" = N/A	JOB NO. 1175.60

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**LEGEND**

---	(7700)	EXISTING CONTOUR	---	TW = XX.XX	PROPOSED RETAINING WALL
---	7700	PROPOSED CONTOUR	---	BW = XX.XX	EXISTING TEMPORARY SEDIMENT BASIN
---		PROPOSED LIMITS OF GRADING	---	EX TSB	EXISTING SILT FENCE
---		BOUNDARY/R.O.W. LINE	---	EX SF	EXISTING STRAW BALE CHECK DAM
---		EXISTING FLOW DIRECTION	---	EX SBB	INLET PROTECTION
---		PROPOSED FLOW	---	EX IP	VEHICLE TRACKING CONTROL
---		"A"	---	EX VTC	EXISTING EROSION CONTROL BLANKET
---		"B"	---	EX ECB	EXISTING VEGETATION
---		"W/O"	---		
---		"T"	---		
---		"G"	---		
---		PROPOSED INLET	---		
---		PROPOSED STORM SEWER PIPE	---		
---		EXISTING HIGH POINT	---		
---		EXISTING LOW POINT	---		

Checklist Item H - label Construction Site Boundary. If same as Limits of Grading, revise Legend text to say: "Proposed Limits of Grading / Construction Site Boundary"

SWMP Checklist Item 17d - Delineate areas of cut and fill

Show location of CWA, staging areas, and designated stockpiles. Or note that these locations are TBD.

**NOTE:**  
SEE SHEET 05 & 06 FOR LOT TEMPLATES AND EROSION CONTROL DETAILS

Revise to match in type shown in Legend (typ)

**NOTE:**  
OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN.

48 HOURS BEFORE YOU DIG,  
CALL UTILITY LOCATORS  
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NO.	REVISION	DATE

REVIEW:  
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

**CLASSIC CONSULTING**  
619 N. Cascade Avenue, Suite 200      (719) 785-0790  
Colorado Springs, Colorado 80903      (719) 785-0799 (fax)

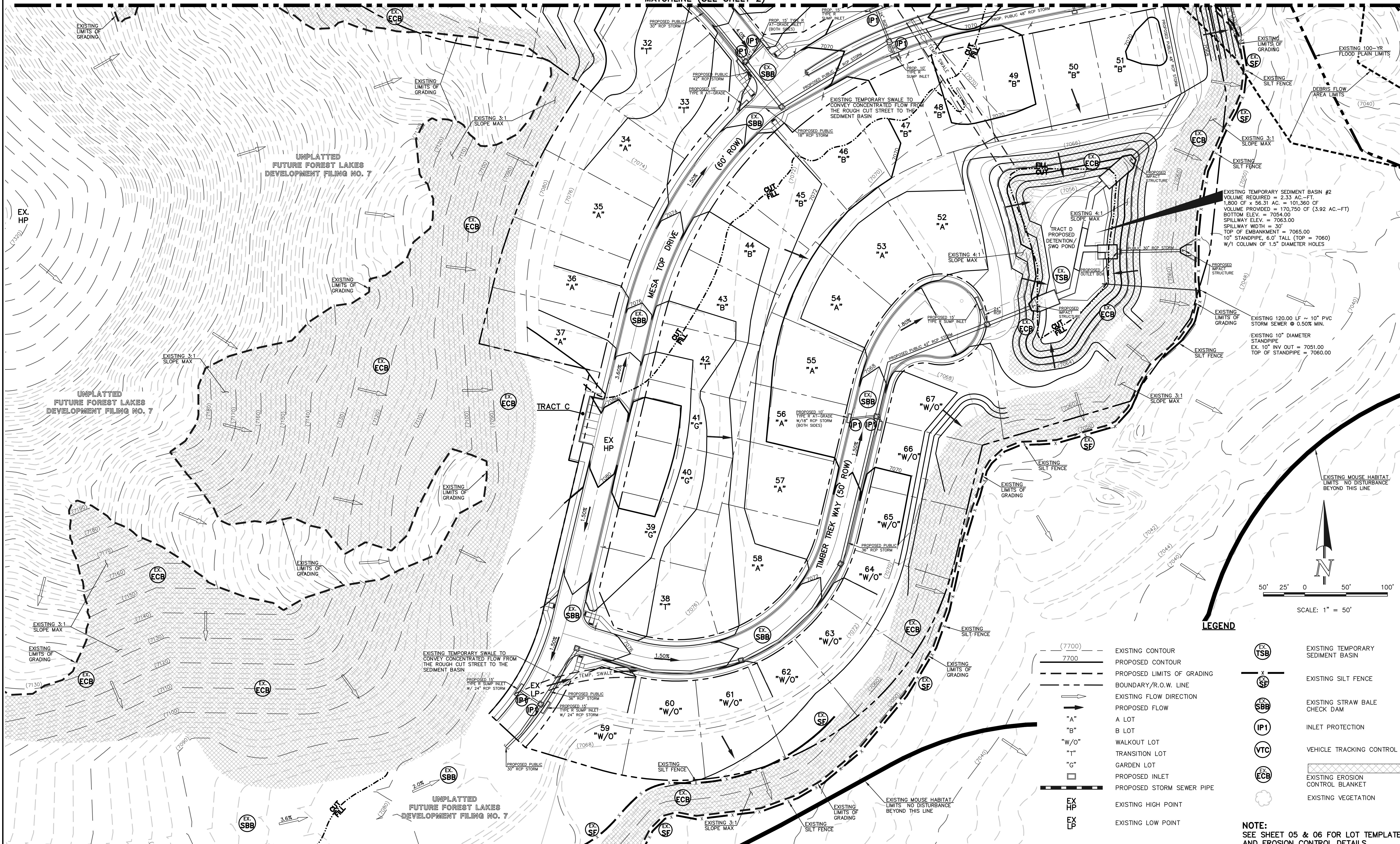
FOREST LAKES FILING NO. 6  
GRADING AND EROSION CONTROL PLAN

DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 50'	SHEET	2 OF 25
CHECKED BY		(V) 1" = N/A	JOB NO.	1175.60

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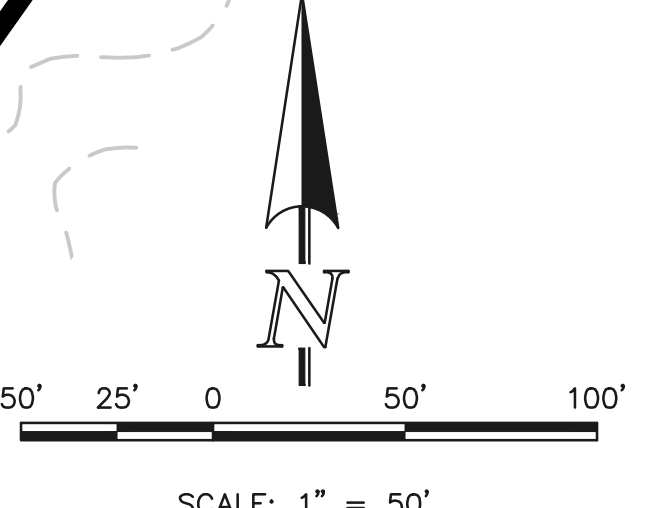
MATCHLINE (SEE SHEET 2)



**LEGEND**

- (7700) --- EXISTING CONTOUR
- 7700 --- PROPOSED CONTOUR
- - - - - PROPOSED LIMITS OF GRADING
- BOUNDARY/R.O.W. LINE
- EXISTING FLOW DIRECTION
- PROPOSED FLOW
- "A" A LOT
- "B" B LOT
- "W/O" WALKOUT LOT
- "T" TRANSITION LOT
- "G" GARDEN LOT
- PROPOSED INLET
- PROPOSED STORM SEWER PIPE
- EX HP EXISTING HIGH POINT
- EX LP EXISTING LOW POINT
- ⊙ EX TSB EXISTING TEMPORARY SEDIMENT BASIN
- ⊗ EX SF EXISTING SILT FENCE
- ⊙ EX SBB EXISTING STRAW BALE CHECK DAM
- ⊙ IP1 INLET PROTECTION
- ⊙ VTC VEHICLE TRACKING CONTROL
- ▨ EX ECB EXISTING EROSION CONTROL BLANKET
- ⊙ EX VEG EXISTING VEGETATION

**NOTE:**  
SEE SHEET 05 & 06 FOR LOT TEMPLATES AND EROSION CONTROL DETAILS



**NOTE:**  
OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN.

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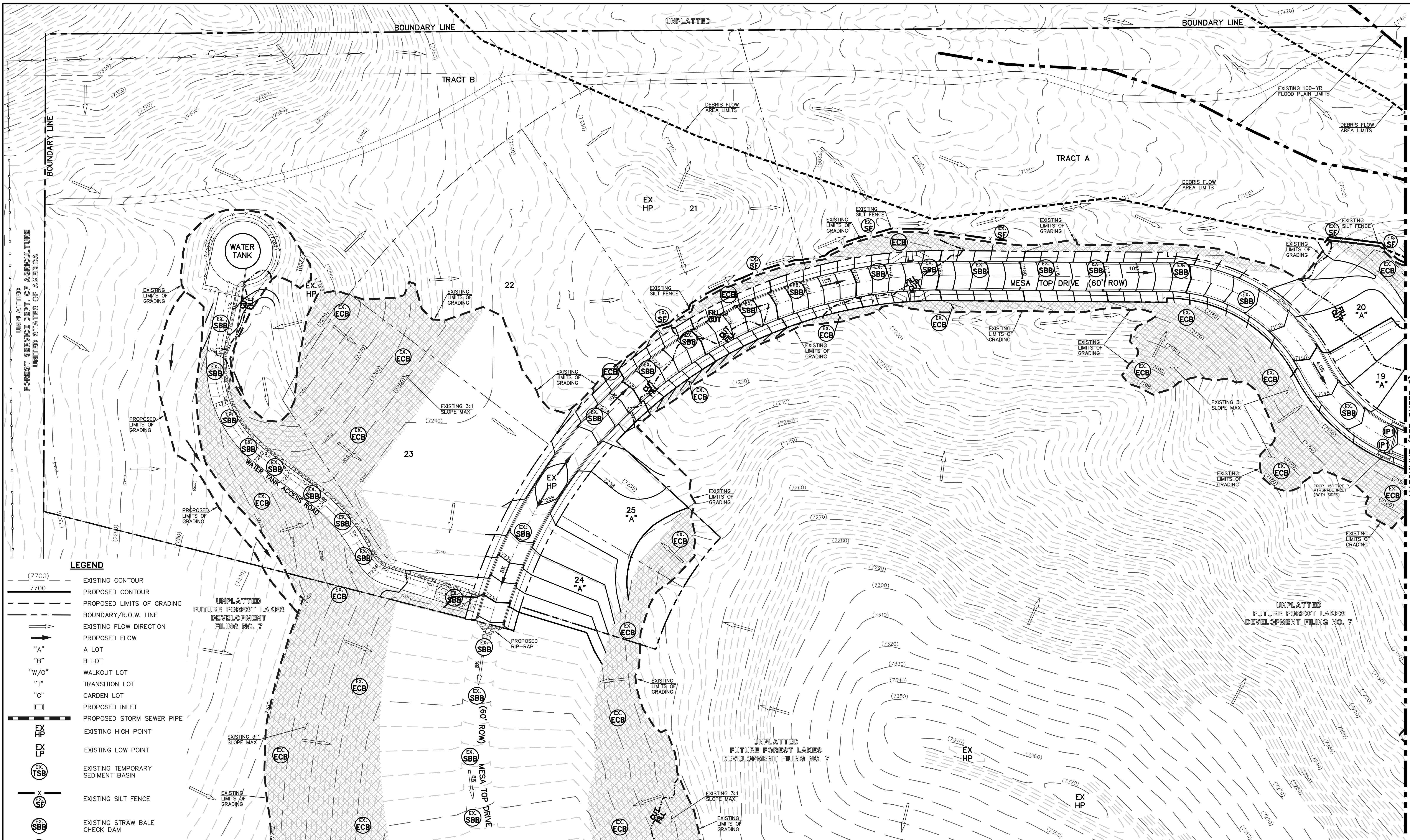


**FOREST LAKES FILING NO. 6**  
GRADING AND EROSION CONTROL PLAN

DESIGNED BY	MAL	SCALE	DATE	08/04/2020
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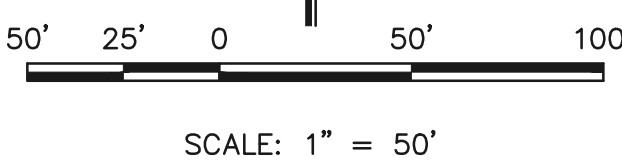
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- LEGEND**
- (7700) --- EXISTING CONTOUR
  - 7700 --- PROPOSED CONTOUR
  - PROPOSED LIMITS OF GRADING
  - BOUNDARY/R.O.W. LINE
  - EXISTING FLOW DIRECTION
  - PROPOSED FLOW
  - "A" A LOT
  - "B" B LOT
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  - "T" TRANSITION LOT
  - "G" GARDEN LOT
  - PROPOSED INLET
  - PROPOSED STORM SEWER PIPE
  - EX HP EXISTING HIGH POINT
  - EX LP EXISTING LOW POINT
  - EX TSB EXISTING TEMPORARY SEDIMENT BASIN
  - EX SF EXISTING SILT FENCE
  - EX SBB EXISTING STRAW BALE CHECK DAM
  - IP INLET PROTECTION
  - VTC VEHICLE TRACKING CONTROL
  - EX CB EXISTING EROSION CONTROL BLANKET
  - ☁ EXISTING VEGETATION

**NOTE:**  
OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN.



48 HOURS BEFORE YOU DIG,  
CALL UTILITY LOCATORS  
**811**  
UTILITY NOTIFICATION CENTER OF COLORADO  
IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



FOREST LAKES FILING NO. 6			
GRADING AND EROSION CONTROL PLAN			
DESIGNED BY	MAL	SCALE	DATE 08/04/2020
DRAWN BY	MES	(H) 1" = 50'	SHEET 4 OF 25
CHECKED BY	(V)	1" = N/A	JOB NO. 1175.60

**NOTE:**  
SEE SHEET 05 & 06 FOR LOT TEMPLATES AND EROSION CONTROL DETAILS

MATCHLINE (SEE SHEET 2)

N:\117560\FORAMINCS\CONSTRUCTIVE\TOP\GRADING-EROSION\04-117560-CR-03.dwg, 10/26/2020 3:30:10 PM, 1:1



**NOTES:**

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 THE 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

A PORTION OF THE OVERALL FOREST LAKES DEVELOPMENT IS LOCATED WITHIN A FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) MAP NUMBERS 08041 CO267G, CO266G, CO258G & CO259G EFFECTIVE DATE, DECEMBER 7, 2018. HOWEVER, THERE IS NO PORTION OF FILING 6 DEVELOPMENT WITHIN THE FLOODPLAIN LIMITS.

THE AVERAGE SOIL CONDITION REFLECTS HYDROLOGIC SOIL GROUP "B", MOSTLY JARRE-TECOLOTE COMPLEX AND PEYTON-PRING COMPLEX AS DETERMINED BY THE "SOIL SURVEY OF EL PASO COUNTY AREA" PREPARED BY THE U.S. SOIL CONSERVATION SERVICE.

EXISTING VEGETATION CONSISTS OF NATIVE GRASSES.

EMERGENCY OVERFLOW SWALES FOR INLETS IN THE INTERIM UNTIL CURB AND ASPHALT IS INSTALLED WILL BE THE LOTS. FINAL WILL BE TO OVERTOP THE HIGH POINT IN ROADWAY TO THE NEXT AVAILABLE INLET OR TO PROPOSED POND.

STOCKPILE LOCATIONS FOR HOMEBUILDING TO BE ON EACH INDIVIDUAL LOT THAT IS BEING BUILT UPON.

LIMITS OF DISTURBANCE FOR THIS PLAN INCLUDE UTILITY INSTALLATION AND ROADWAY CONSTRUCTION WITHIN THE R.O.W., AND OVERLOT GRADING FOR DEVELOPMENT THEN INDIVIDUAL LOTS FOR HOMEBUILDING ONCE CONSTRUCTION OF THE HOME BEGINS.

GRADING WITHIN THIS PHASE WILL BE FULLY DEVELOPED WITH HOME BUILDING OPERATIONS.

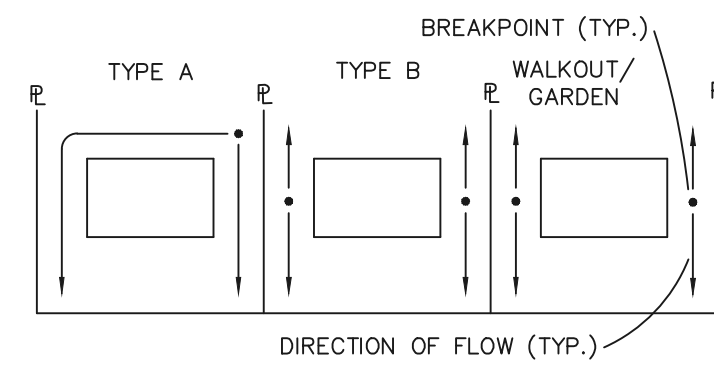
LOCATION OF STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

ALL AREAS ARE TO BE RESEEDED OUTSIDE OF THE FILING NO. 5 AREA. RESEED ALL AREAS AS NEEDED TO PREVENT EROSION AND SEDIMENT RUNOFF ONTO CONSTRUCTION ACTIVITIES.

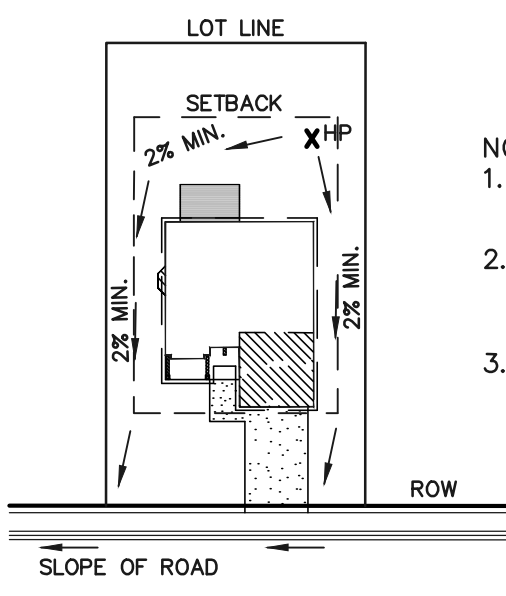
**SCHEDULE OF ANTICIPATED CONSTRUCTION ACTIVITY:**

1. INSTALL INITIAL BMP'S
2. INSPECTION OF INITIAL BMP'S BY COUNTY STAFF
3. PRECONSTRUCTION MEETING WITH COUNTY STAFF

BEGIN CONSTRUCTION UPON APPROVAL	ACTIVITY ALL SITE ROADWAY GRADING AND UTILITY INSTALLATION	COMPLETION 6 MONTHS	EROSION CONTROL ALL SHOWN ON GRADING PLAN
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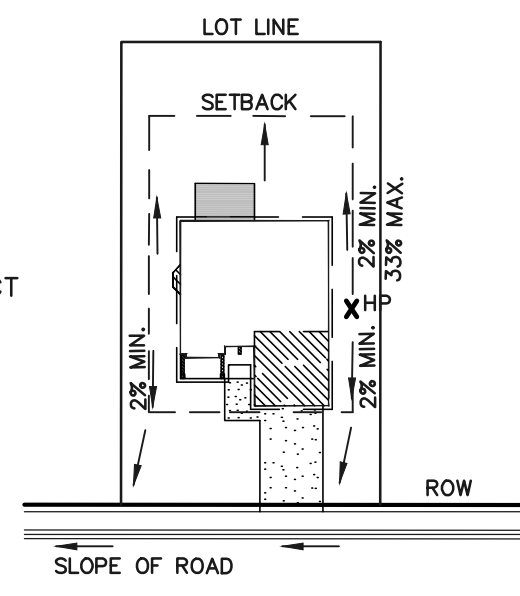


**LOT DRAINAGE TYPES**

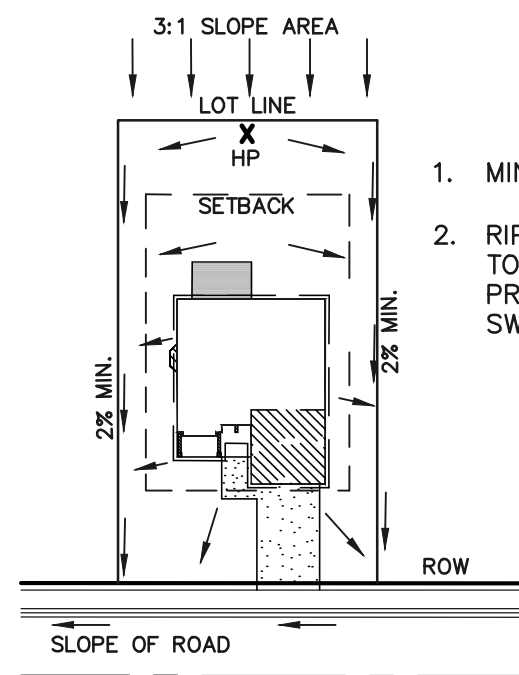


**TYPICAL "A" LOT DRAINAGE PATTERN**  
N.T.S.

- NOTES:**
1. SIDEYARD SWALES TO BE CONST. AT 2% MIN. SLOPE.
  2. HP LOCATION ON INDIVIDUAL LOTS WILL VARY DEPENDING UPON EXACT UNIT SIZE AND LOCATION.
  3. TOF ELEV. MUST BE MIN. 18" HIGHER THAN ESTABLISHED HP.

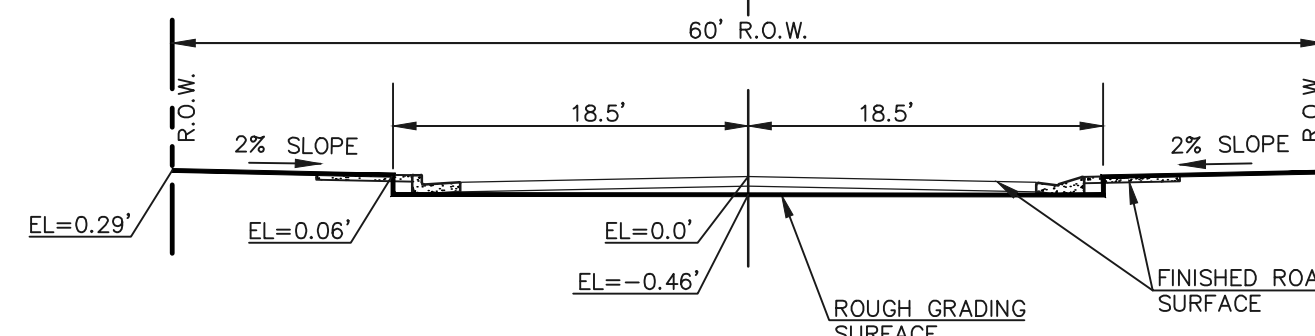


**TYPICAL "B", "G," "W/O" LOT DRAINAGE PATTERN**  
N.T.S.



**"A" LOTS W/SLOPE BEHIND DRAINAGE PATTERN**  
N.T.S.

1. MINIMUM LOT WIDTH ALONG SLOPE IS 70'.
2. RIPRAP OR CONCRETE "V" NOTCH SWALES TO BE INSTALLED ALONG SHARED PROPERTY & WITHIN SIDE LOT EASEMENTS. SWALES TO DISCHARGE ONTO ROADWAY.



**60' R.O.W. TYPICAL STREET SECTION HOLD-DOWN OVERLOT GRADING IN ROADWAYS**  
SCALE 1" = 10'

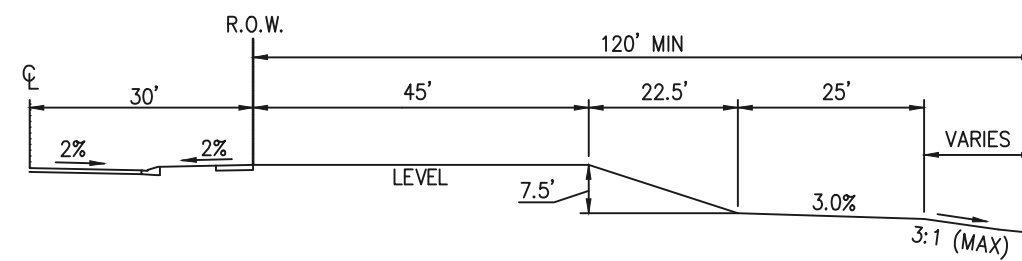
**EROSION CONTROL CRITERIA:**

EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.

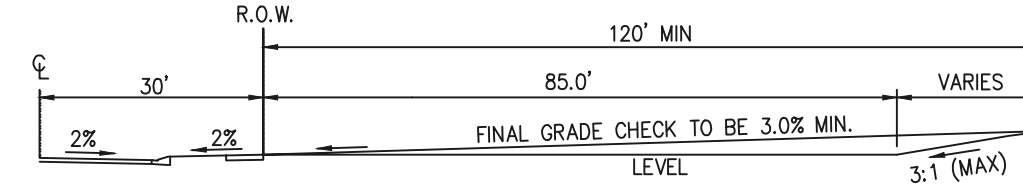
- 1) THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 2) DURING GRADING OPERATIONS, LOCATE AND SET THE STRAW BALE CHECK DAMS AND SILT FENCES AS SHOWN ON THE EROSION CONTROL PLAN. AT THIS TIME RESEED ALL DISTURBED AREAS WITH AN EL PASO COUNTY APPROVED SEED MIX.
- 3) SEEDING APPLICATION: DRILLED TO A DEPTH OF 2" TO 5" INTO SOIL WHERE POSSIBLE. BROADCAST AND RAKED TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.
- 4) MULCHING REQUIREMENT AND APPLICATION: 1.5 TONS PER ACRE NATIVE HAY MECHANICALLY CRIMPED INTO SOIL.
- 5) THE STRAW BALE CHECK DAMS AND SILT FENCES SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE STRAW BALES IS REQUIRED ONCE IT REACHES HALF THE HEIGHT OF THE STRAW BALES OR SILT FENCE.
- 6) DISTURBED SOIL SHALL BE VEGETATED WITHIN 60 DAYS AFTER SUBSTANTIAL FINAL GRADING IS COMPLETE. PROVIDE TEMPORARY VEGETATION TO DISTURBED AREAS THAT WILL HAVE A PERIOD OF EXPOSURE OF 6 MONTHS OR LONGER PRIOR TO FINAL STABILIZATION.
- 7) ALL FACILITIES, VEGETATION AND OTHER ITEMS REQUIRED BY THE APPROVED FINAL GRADING, EROSION CONTROL AND RECLAMATION PLAN SHALL BE PROPERLY MAINTAINED BY THE OWNERS OF THE PROPERTY. SUCH MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO KEEPING ALL EROSION CONTROL FACILITIES IN GOOD ORDER AND FUNCTIONAL, REPAIRING ANY EROSION DAMAGE THAT OCCURS, KEEPING ALL VEGETATION HEALTHY AND IN GROWING CONDITION AND REPLACING ANY DEAD VEGETATION AS SOON AS PRACTICABLE.
- 8) ALL SILT FENCES ARE TO BE REGULARLY INSPECTED AND REPAIRED AS NEEDED.
- 9) THE CONTRACTOR SHALL PROVIDE VEHICLE TRACKING CONTROL FACILITIES FOR EACH ENTRANCE/EXIT TO THE SITE. THE CONTRACTOR SHALL SUBMIT A PLAN WHICH WILL ASSURE USAGE OF THIS FACILITY BY ALL VEHICLES LEAVING THE SITE.
- 10) EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH STORM EVENT AND REPAIRED WHEN NECESSARY.
- 11) CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL FACILITIES IN GOOD WORKING ORDER UNTIL SUCH TIME AS PERMANENT FACILITIES ARE IN PLACE AND THE CONSTRUCTION MANAGER HAS APPROVED THEIR REMOVAL.
- 12) ADDITIONAL EROSION CONTROL STRUCTURES MAY BE INSTALLED AT THE TIME OF CONSTRUCTION.
- 13) THE EROSION CONTROL MEASURES OUTLINED ON THE PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE AND REBUILD AS NECESSARY UNTIL VEGETATION IS ESTABLISHED.
- 14) MAXIMUM ACREAGE OPEN AT ANY GIVEN TIME IS TO BE 30 ACRES.

Revise according to DCM Vol 2 - Section 3.2 - General Principles #16.

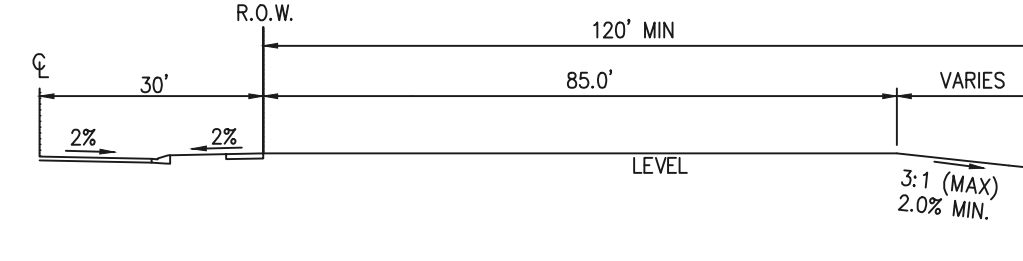
Show location of CWA or notate that it will be determined by contractor and marked on SWMP later on.



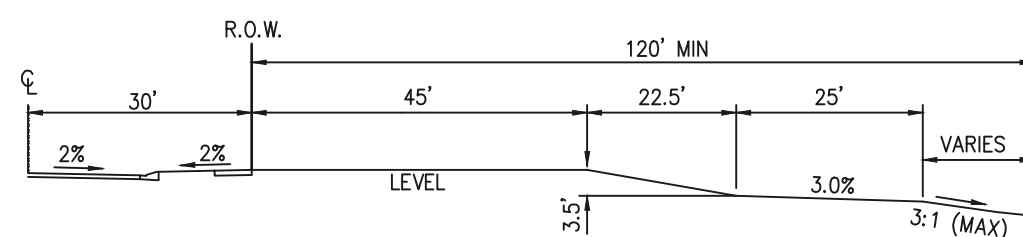
**TYPICAL WALKOUT (W/O) LOT**  
NOT TO SCALE



**TYPICAL A LOT**  
NOT TO SCALE



**TYPICAL B LOT**  
NOT TO SCALE

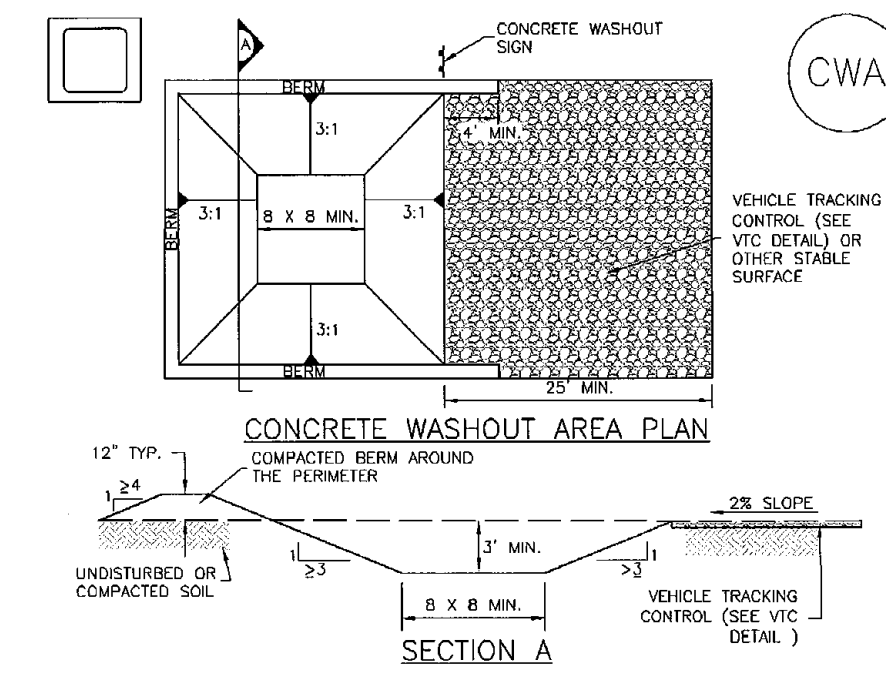


**TYPICAL GARDEN (G) LOT**  
NOT TO SCALE

**SEEDING GUIDELINES**

1. **SEEDBED PREPARATION**  
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRILABLE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THEN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.
2. **FERTILIZER**  
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAIL-ABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOLLOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.
3. **SEEDING**  
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 33% (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD. THE TIME OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.
4. **MULCHING**  
SEEDED AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE, PREVENT SURFACE COMPACTION OR CRUSTING, REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.  
NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGRONOMY BLANKET SHOULD BE USED.
5. **SUPPLEMENTAL WATER**  
IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.

**Concrete Washout Area (CWA) MM-1**



**CWA-1. CONCRETE WASHOUT AREA**

**CWA INSTALLATION NOTES**

1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 100' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (1/8 IN. MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED SOCKS GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 6" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 1' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
8. USE EXCAVATED MATERIAL FOR PERMANENT BERM CONSTRUCTION.

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

**MM-1 Concrete Washout Area (CWA)**

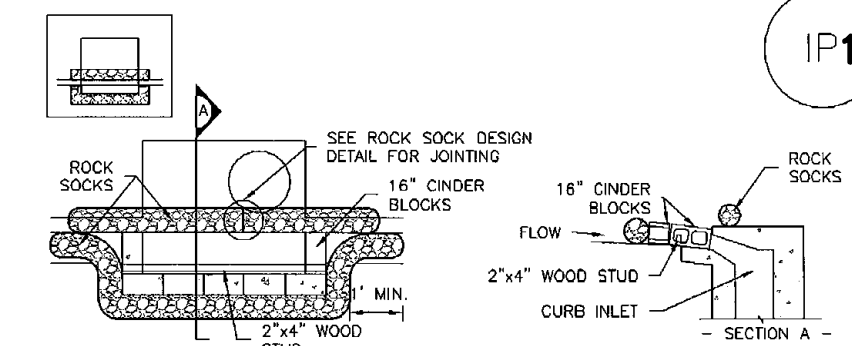
**CWA MAINTENANCE NOTES**

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

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

**SC-6**

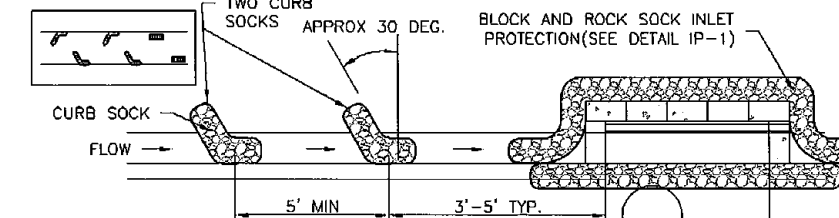
**Inlet Protection (IP)**



**IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION**

**BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES**

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CHOKER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BASS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



**IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION**

**CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES**

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

No details shown for ECB, TSB, SF, SBB, or VTC. Even if these are all existing and no new installs will occur, would prefer to see the details in drawing set so contractor can see maintenance requirements for each. Examples of acceptable details for each are provided below:

BMP	DCM	MHFD
Roller Erosion Control Products	ECB-1, ECB-2	EC-6
Sediment Basin	SB-1, SB-2	SC-7
Silt Fence	SF-2, SF-3	SC-1
Straw Bale Barrier	SBB-2	SC-3
Vehicle Tracking Control	VT-1, VT-2	SM-4

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

**EL PASO COUNTY:**

SEE SHEET 6 FOR EL PASO COUNTY STANDARD NOTES AND SITE SPECIFIC CONSTRUCTION CONTROL MEASURES NOTES.

NO.	REVISION	DATE

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS  
**811**  
UTILITY NOTIFICATION CENTER OF COLORADO  
IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REVIEW:  
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



**FOREST LAKES FILING NO. 6 CONSTRUCTION PLANS GRADING AND EROSION CONTROL PLAN DETAIL SHEET**

DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = N/A	SHEET	5 OF 25
CHECKED BY		(V) 1" = N/A	JOB NO.	1175.60



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**EL PASO COUNTY GRADING AND EROSION CONTROL NOTES:**

- 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 FROM 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 IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED 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 GEC. 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 AFFECT 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 INFEASIBLE 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 LOOSENED 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 OF UNCONTAMINATED GROUND WATER 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.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- 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 ONSITE 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 ONSITE 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, DOM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES FLOODPLAIN, 404, 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, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (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:

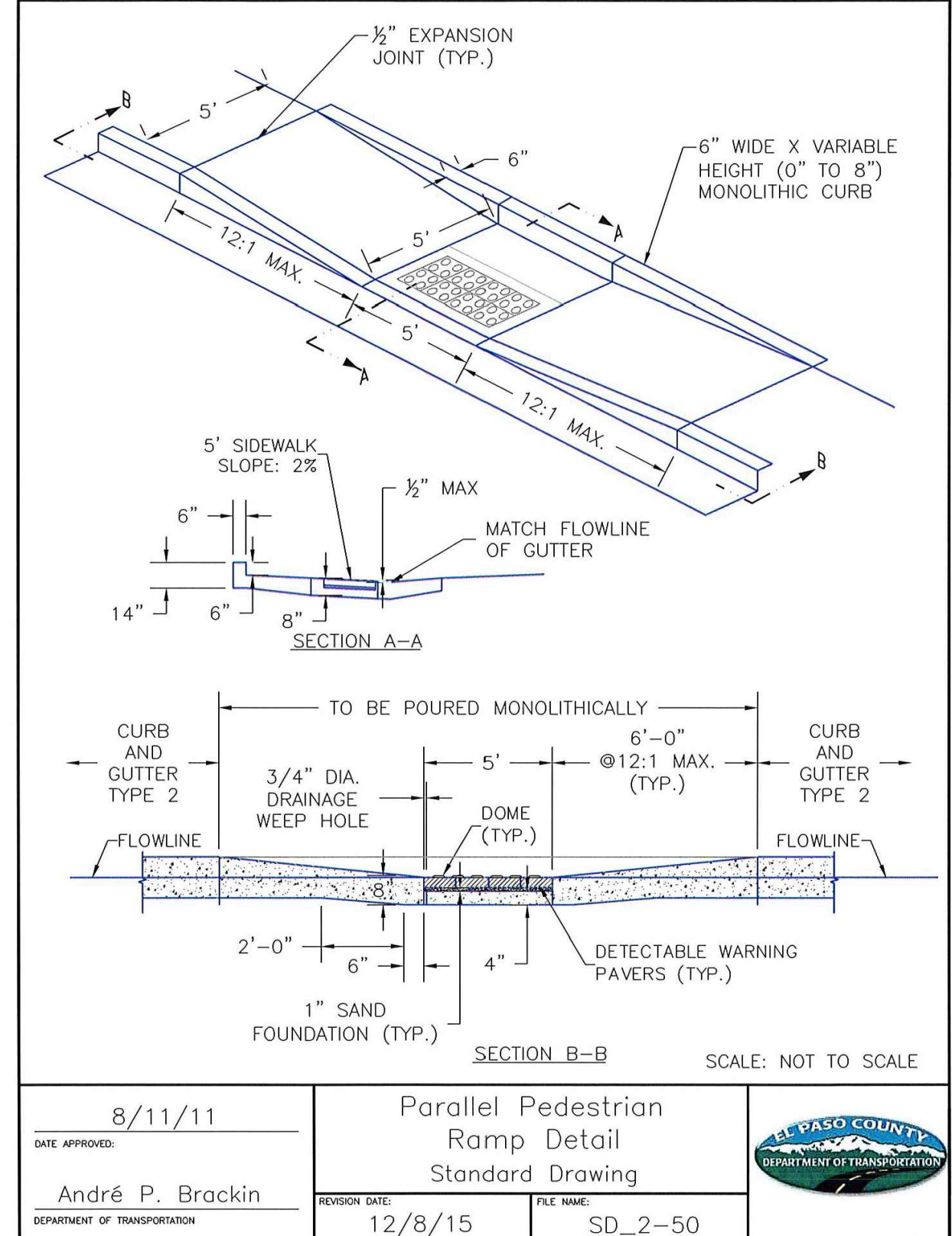
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
 WATER QUALITY CONTROL DIVISION  
 WQCD - PERMITS  
 4300 CHERRY CREEK DRIVE SOUTH  
 DENVER, CO 80246-1530  
 ATTN: PERMITS UNIT

**CONSTRUCTION CONTROL MEASURES NOTES:**

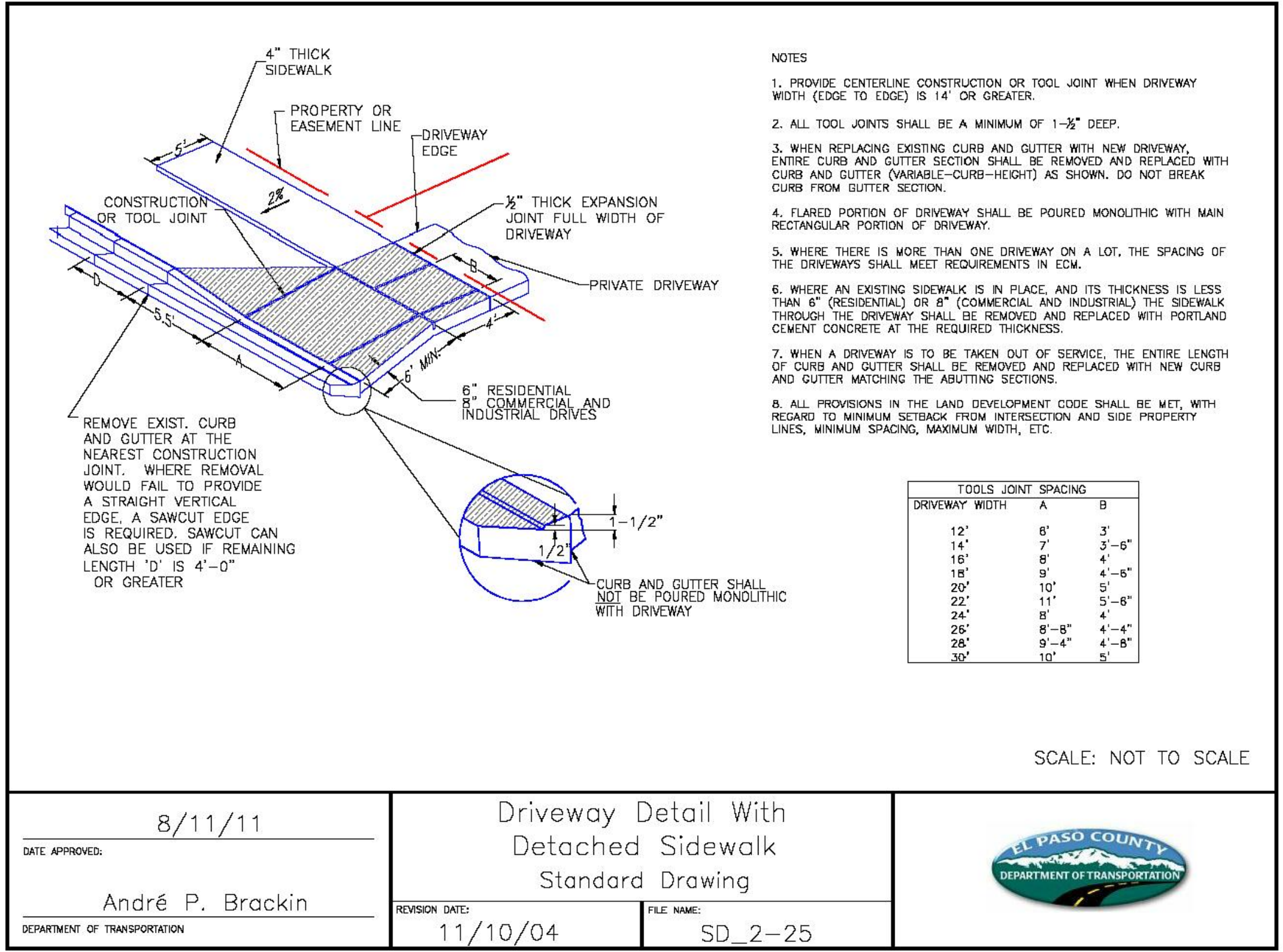
- CONTRACTOR TO DETERMINE AREAS USED FOR STAGING, STORAGE OF MATERIALS, SOILS (STOCKPILES) OR WASTES AND SHALL MARK ON THE SITE SWMP AT ALL TIMES. THE USE OF CONSTRUCTION OFFICE TRAILERS REQUIRES PCD PERMITTING.
- THE EROSION CONTROL MEASURES SHOWN ON THE APPROVED "FOREST LAKES FILING NO. 5, 6, & 7 PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN" SHOW AND CALL-OUT THE 'INITIAL' STAGE OF TEMPORARY CONSTRUCTION CONTROL MEASURES.
- THE PROPOSED GRADING/EROSION CONTROL PLAN (SHEETS 2-4) SHOW AND CALL-OUT THE 'INTERIM' STAGE OF CONSTRUCTION CONTROL MEASURES.
- 'FINAL' CONSTRUCTION CONTROL MEASURES ARE STABILIZED/DEVELOPED LOTS, CONSTRUCTED ROADS, RE-SEEDED OPEN SPACE, AND CONSTRUCTED DETENTION PONDS. A PLAN IS NOT NEEDED FOR THE FINAL STAGE.

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 IT'S THE LAW

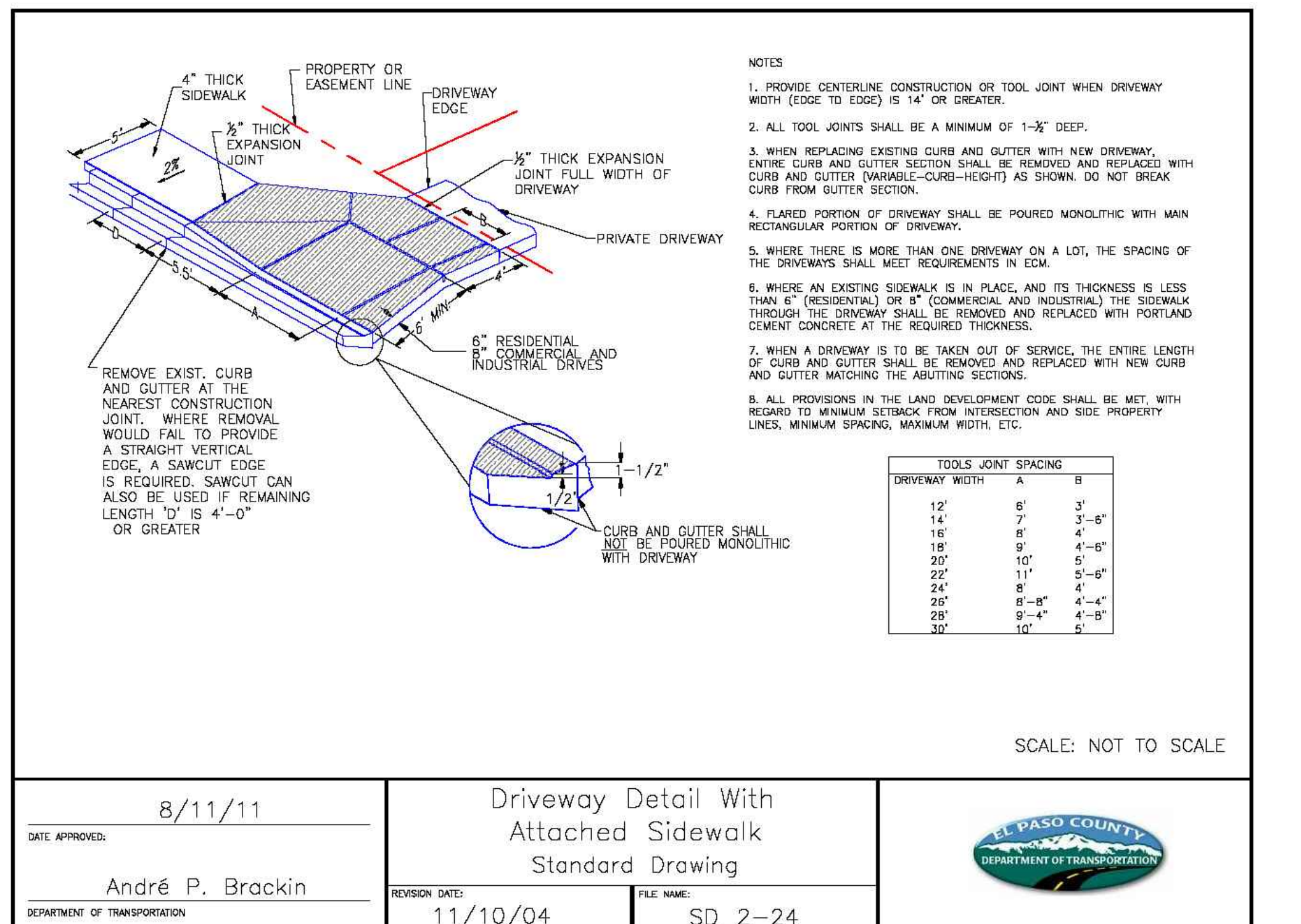
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DATE APPROVED: 8/11/11	PROJECT: Parallel Pedestrian Ramp Detail Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
APPROVED BY: André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2-50



DATE APPROVED: 8/11/11	PROJECT: Driveway Detail With Detached Sidewalk Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
APPROVED BY: André P. Brackin	REVISION DATE: 11/10/04	FILE NAME: SD_2-25



DATE APPROVED: 8/11/11	PROJECT: Driveway Detail With Attached Sidewalk Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
APPROVED BY: André P. Brackin	REVISION DATE: 11/10/04	FILE NAME: SD_2-24

NO.	REVISION	DATE

REVIEW:  
 PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

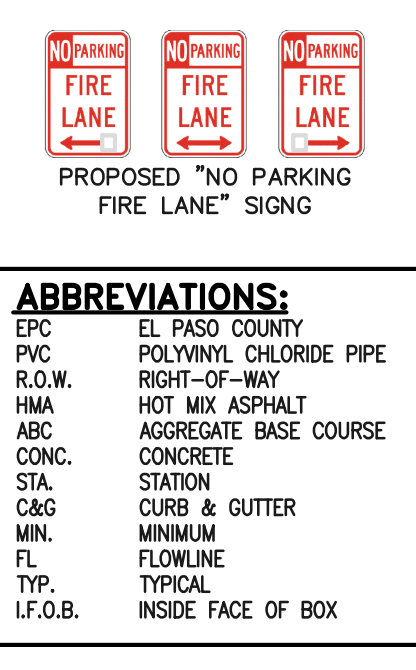
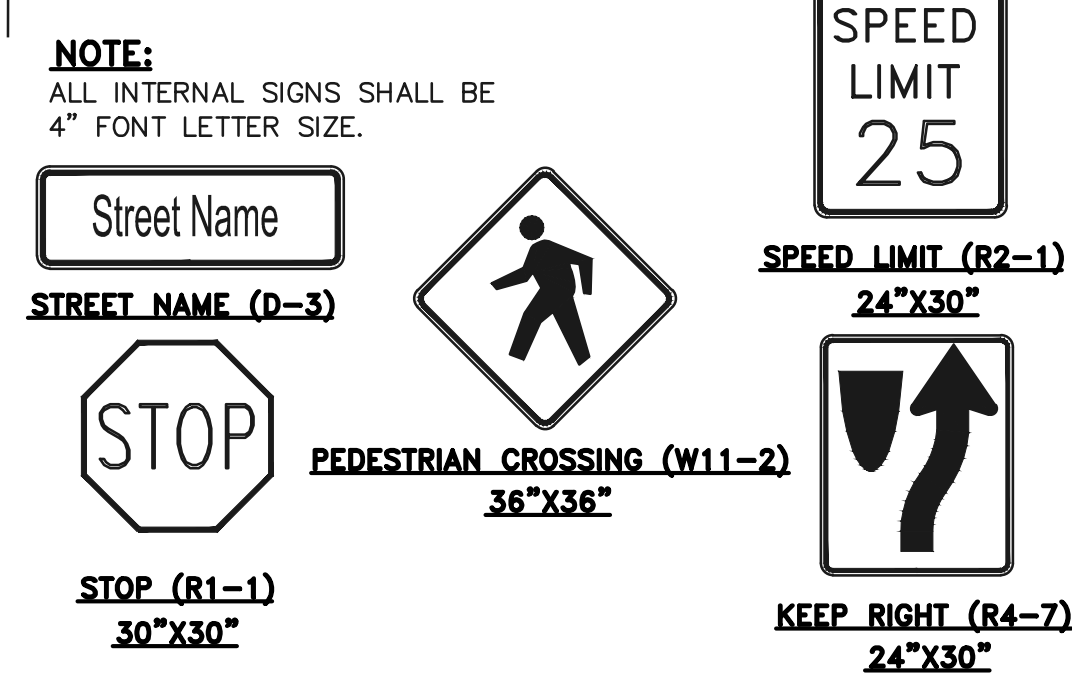
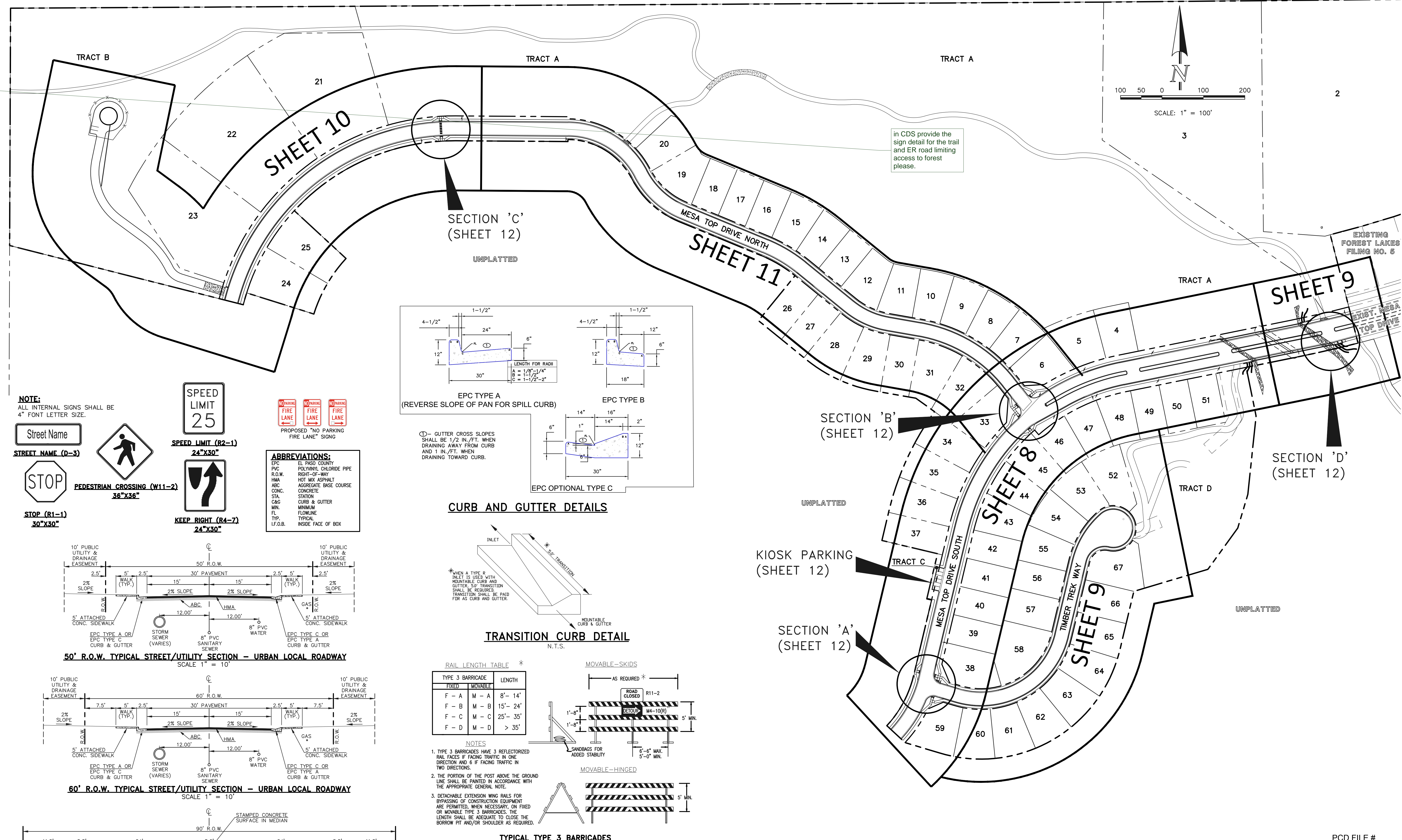
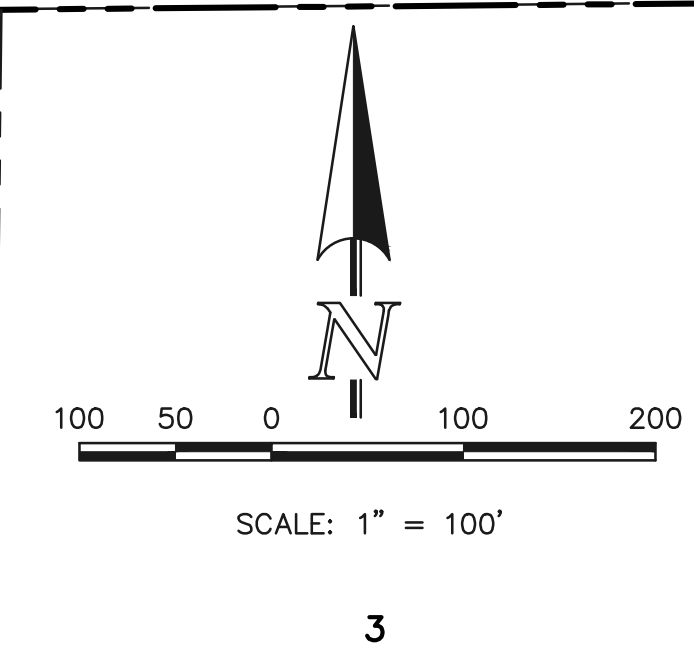
KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



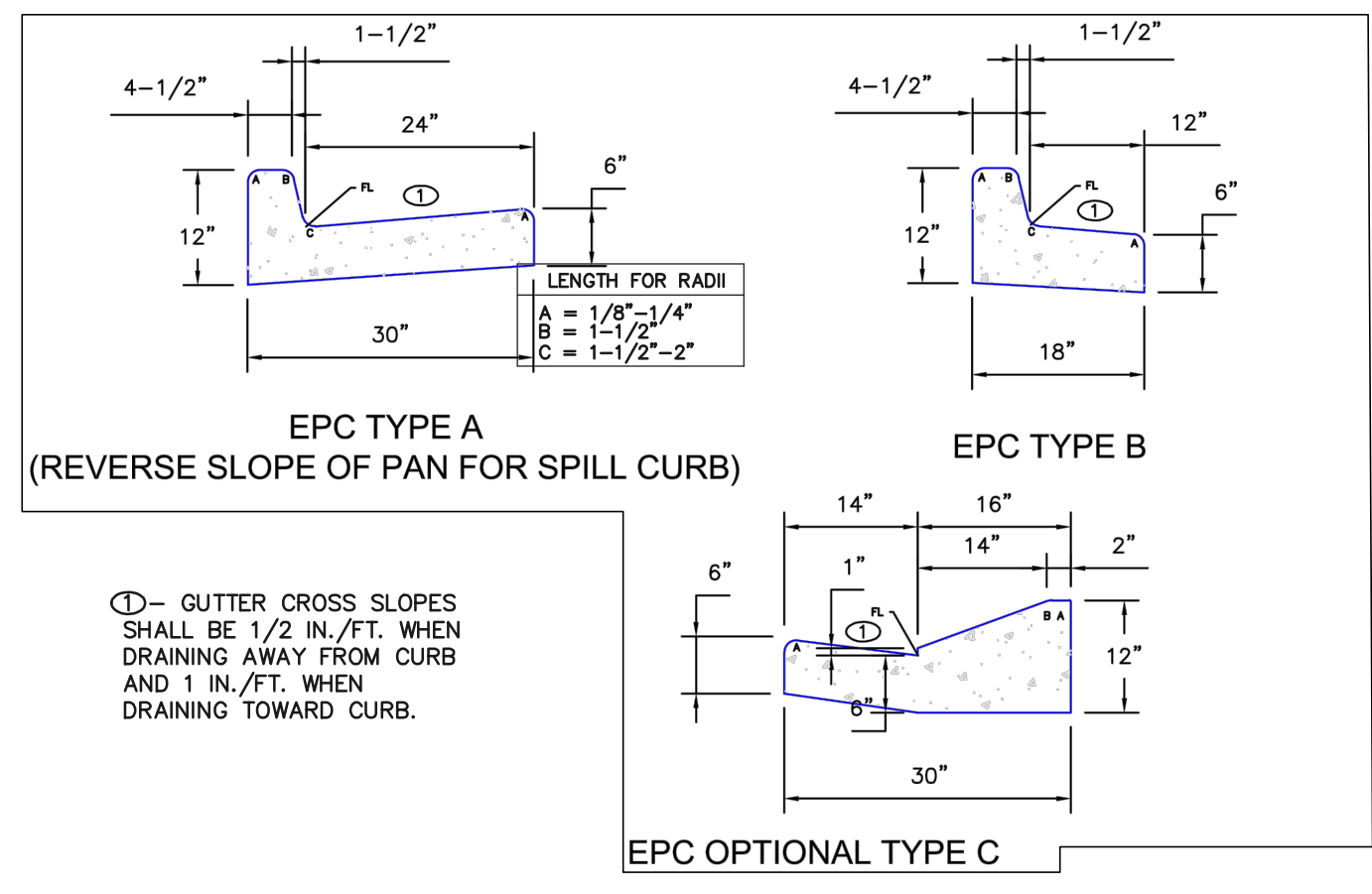
FOREST LAKES FILING NO. 6 CONSTRUCTION PLANS GRADING AND EROSION CONTROL PLAN DETAIL SHEET			
DESIGNED BY	MAL	SCALE	DATE 08/04/2020
DRAWN BY	MES	(H) 1" = N/A	SHEET 6 OF 25
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.50



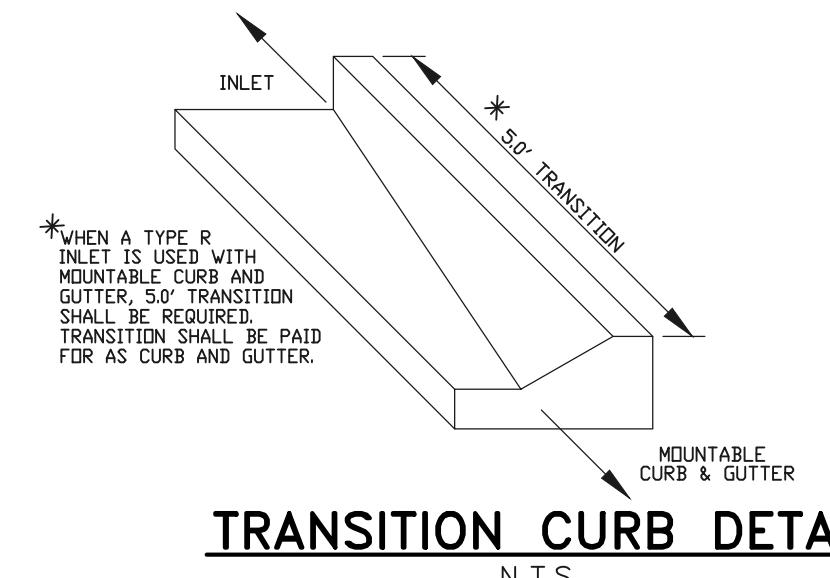




**ABBREVIATIONS:**  
 EPC EL PASO COUNTY POLYVINYL CHLORIDE PIPE  
 PVC POLYVINYL CHLORIDE PIPE  
 R.O.W. RIGHT-OF-WAY  
 HMA HOT MIX ASPHALT  
 ABC AGGREGATE BASE COURSE  
 CONC. CONCRETE  
 STA. STATION  
 C&G CURB & GUTTER  
 MIN. MINIMUM  
 FL FLOWLINE  
 TYP. TYPICAL  
 I.F.O.B. INSIDE FACE OF BOX

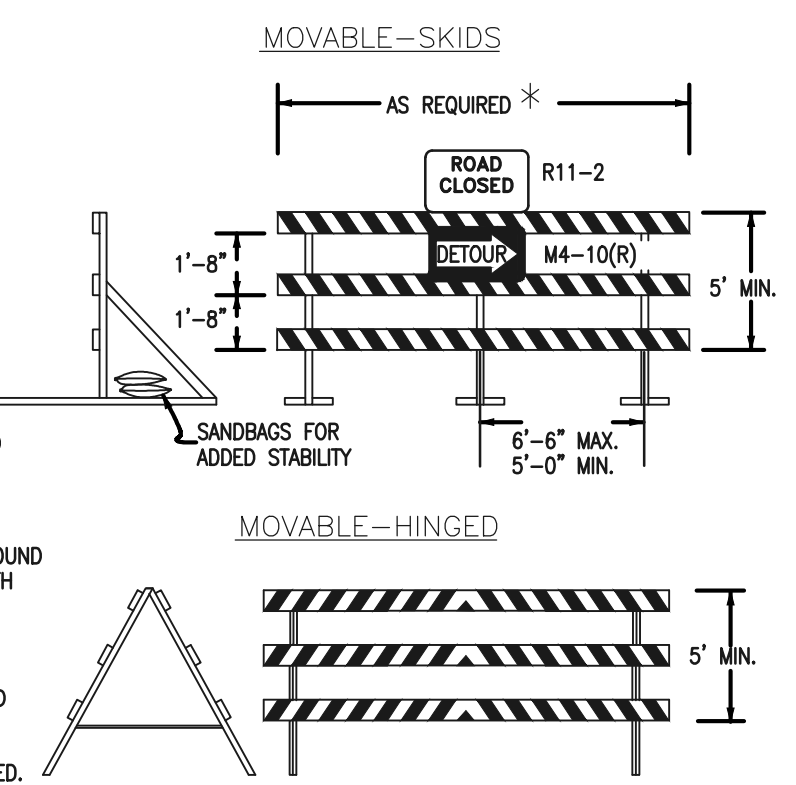


**CURB AND GUTTER DETAILS**



**RAIL LENGTH TABLE \***

TYPE 3 BARRICADE	FIXED	MOVABLE	LENGTH
F - A	M - A		8'- 14'
F - B	M - B		15'- 24'
F - C	M - C		25'- 35'
F - D	M - D		> 35'



- NOTES**
- TYPE 3 BARRICADES HAVE 3 REFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
  - THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
  - DETACHABLE EXTENSION WING RAILS FOR BYPASSING CONSTRUCTION EQUIPMENT ARE PERMITTED, WHEN NECESSARY, ON FIXED OR MOVABLE TYPE 3 BARRICADES. THE LENGTH SHALL BE ADEQUATE TO CLOSE THE BORROW PIT AND/OR SHOULDER AS REQUIRED.

**TYPICAL TYPE 3 BARRICADES**

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794



PCD FILE #

FOREST LAKES FILING NO. 6  
PUBLIC STREET IMPROVEMENT PLAN  
KEY MAP WITH TYPICAL STREET SECTIONS

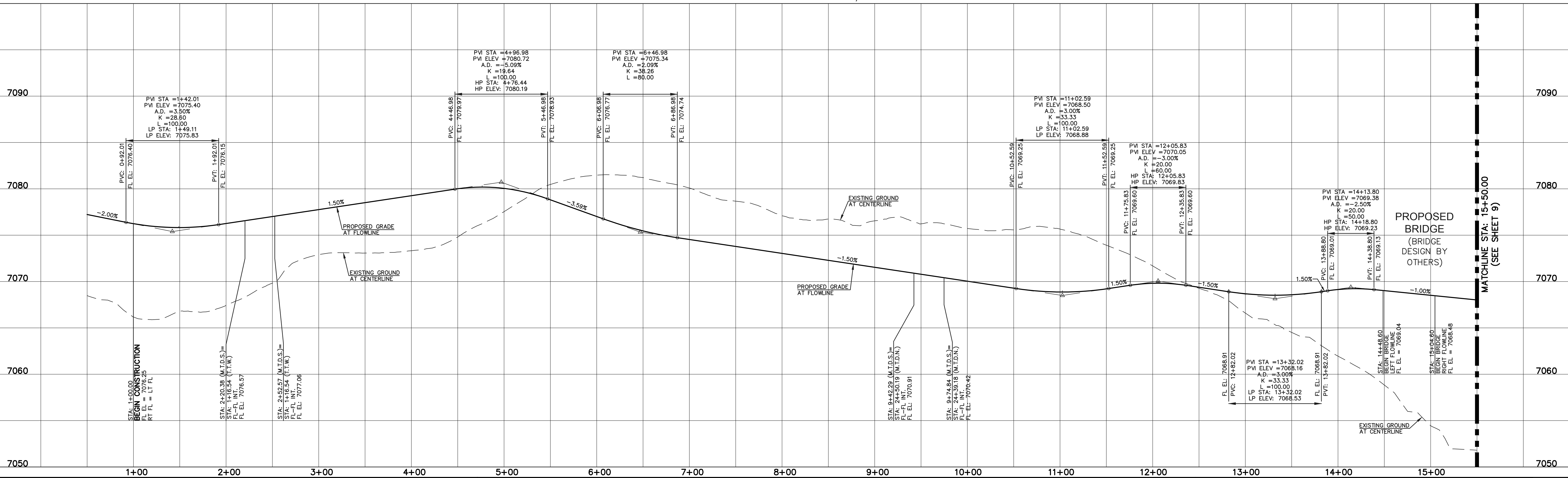
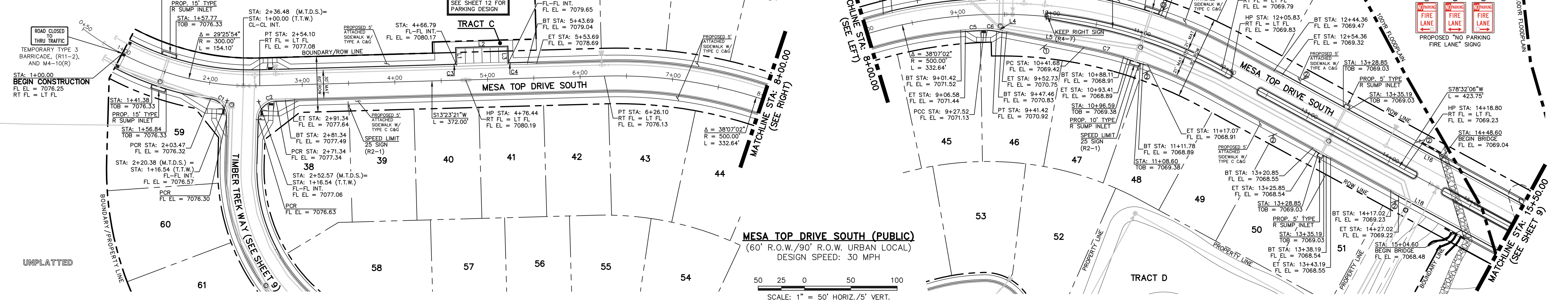
DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 100'	SHEET	7 OF 25
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.60	

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FLOWLINE CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	29.22	20.00	83°41'48"
C2	30.24	20.00	86°38'01"
C3	4.71	3.00	89°59'27"
C4	3.93	2.50	90°00'33"
C5	20.22	483.00	2°23'55"
C6	13.51	59.17	13°04'56"
C7	43.91	472.83	5°19'14"
C8	30.04	20.00	86°02'57"
C9	30.06	20.00	86°07'43"

FLOWLINE LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	15.00	S76°36'10"E
L2	56.00	S13°23'20"W
L3	15.50	N76°36'10"W
L4	5.92	S61°00'40"W
L5	85.01	S61°00'40"W
L16	397.07	S78°32'10"W
L18	280.41	S78°32'10"W



STREET ABBREVIATION INDEX:	
M.T.D.N.	MESA TOP DRIVE NORTH
M.T.D.S.	MESA TOP DRIVE SOUTH
T.T.W.	TIMBER TREK WAY

**WALK CONSTRUCTION:**  
 4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & 'ESTATE LOT' FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTIAL LOTS PER EL PASO COUNTY DIRECTION. 6" REQUIRED AT DRIVEWAY CONNECTIONS PER DETAILS SD 2-24 & SD 2-25 ON SHEET 6. WALK INSTALLED NOT AT 6" THICKNESS WILL BE RE-CONSTRUCTED WITH DRIVEWAY PERMIT AND INSTALLATION AS REQUIRED.

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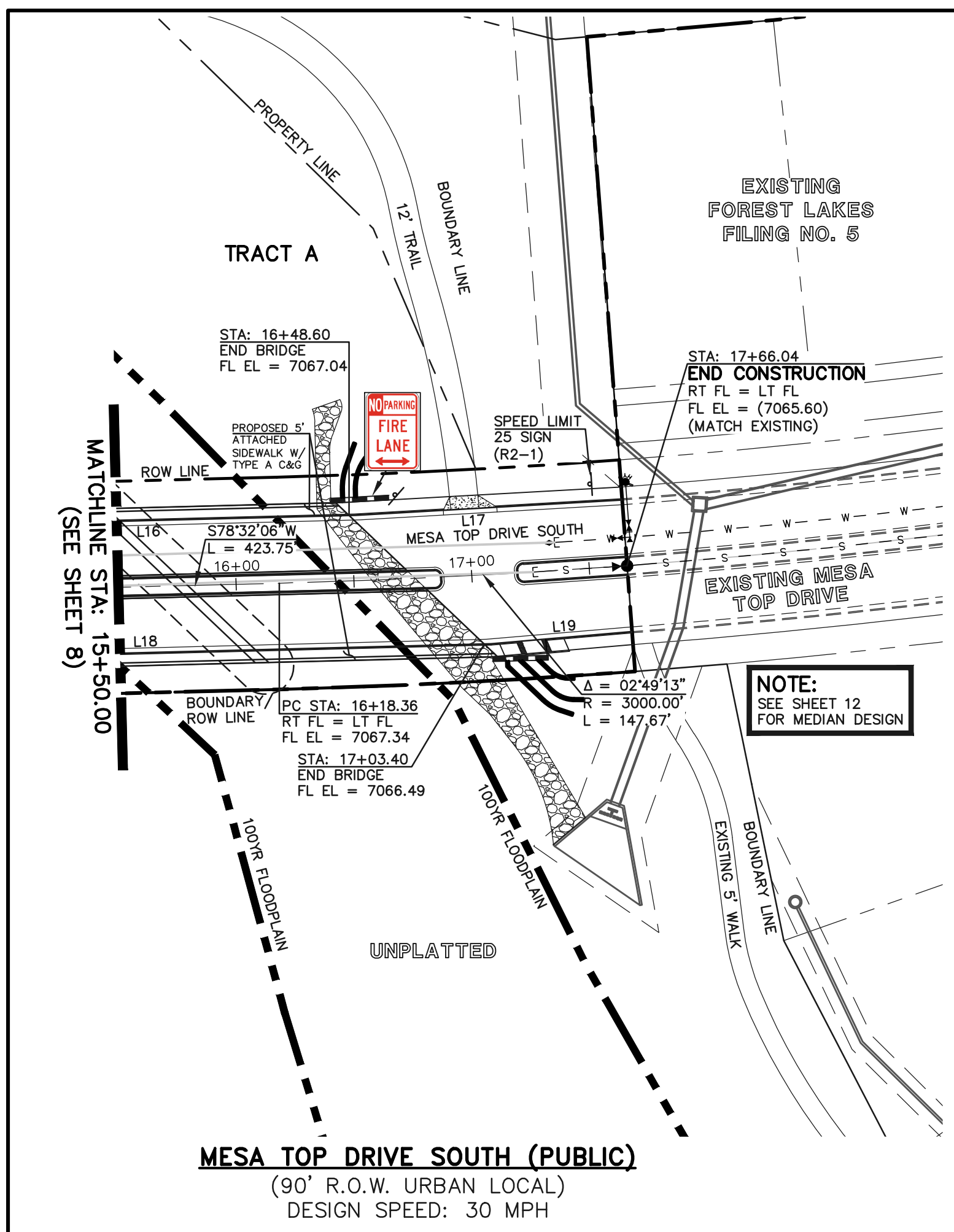
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 PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC  
 KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 6  
 PUBLIC STREET IMPROVEMENT PLAN  
 MESA TOP DRIVE SOUTH  
 STA. 1+00.00 TO STA. 15+50.00  
 DESIGNED BY MAL SCALE DATE 08/04/2020  
 DRAWN BY MES (H) 1" = 50' SHEET 08 OF 25  
 CHECKED BY (V) 1" = 5' JOB NO. 1175.60

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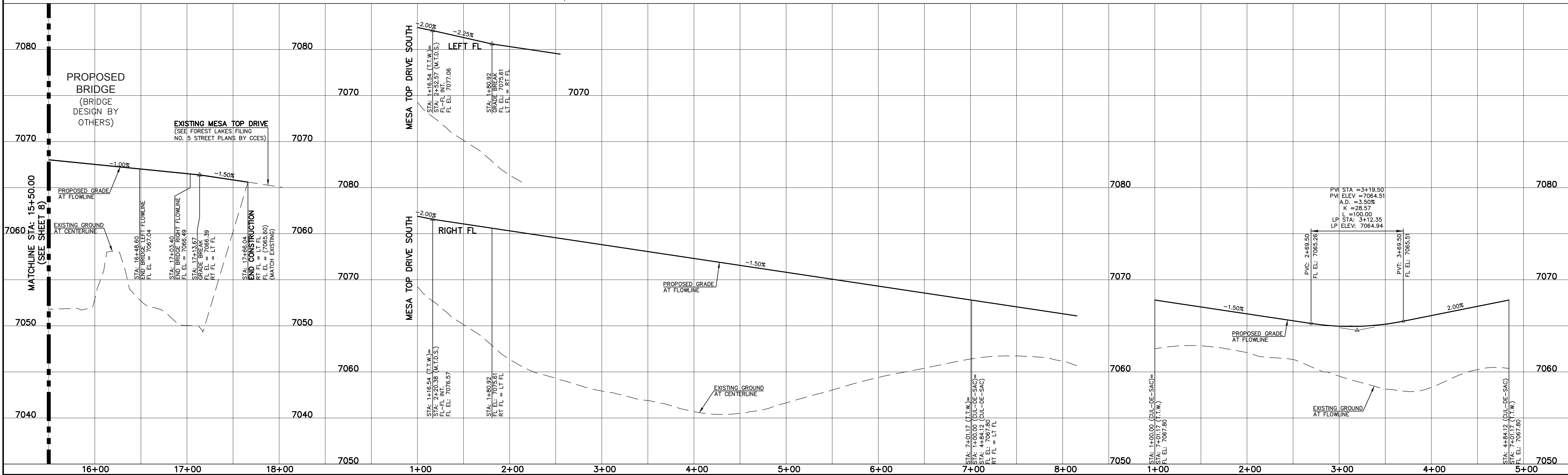
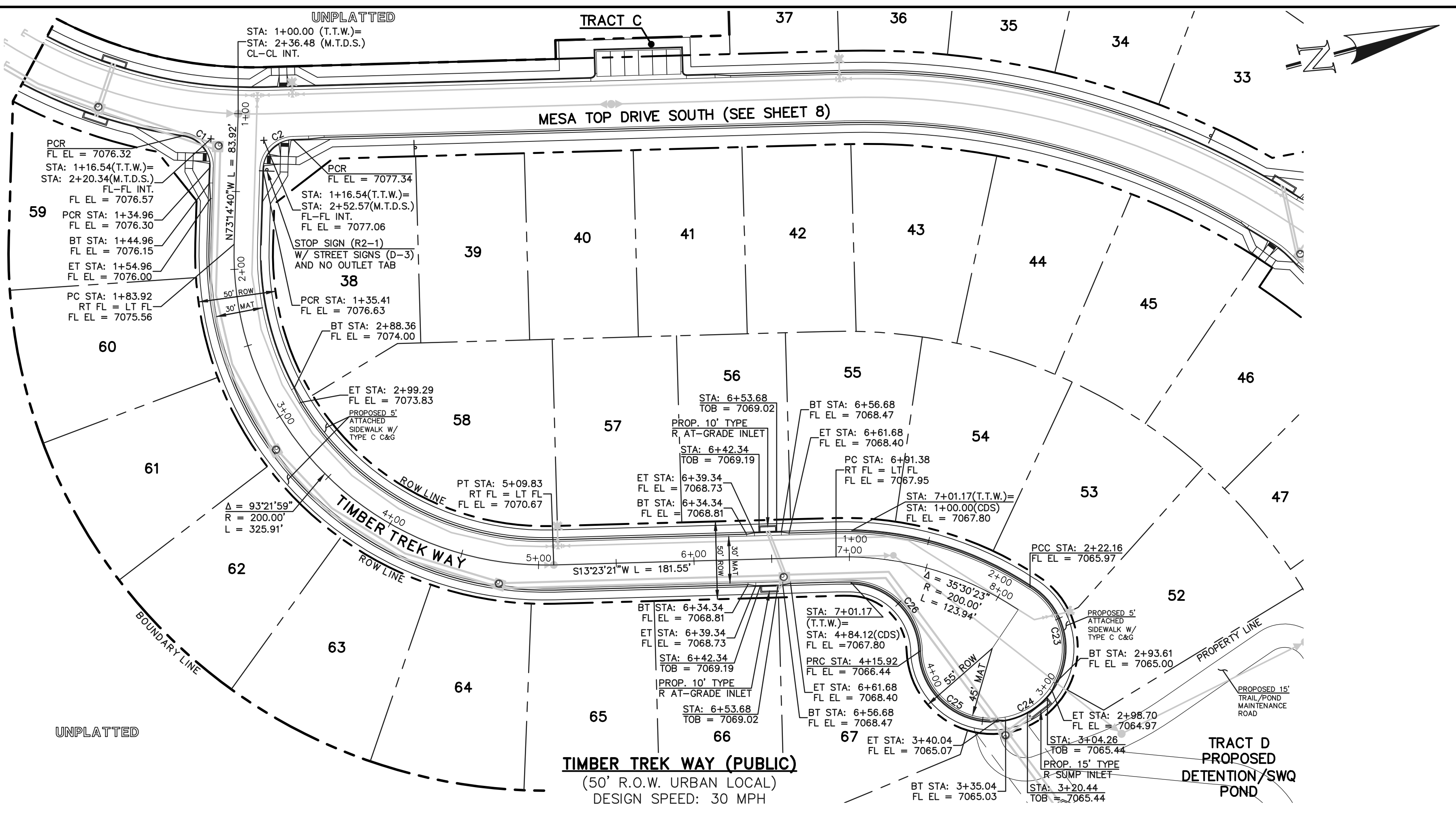




LINE #	LENGTH	DIRECTION
L16	397.07	S78°32'10"W
L17	113.22	S76°42'50"W
L18	280.41	S78°32'10"W
L19	60.03	S75°02'00"W

CURVE #	LENGTH	RADIUS	DELTA
C1	29.22	20.00	83°41'48"
C2	30.24	20.00	86°38'01"
C23	70.18	46.17	87°05'32"
C24	36.34	47.00	44°17'50"
C25	74.54	46.17	92°29'50"
C26	69.46	45.83	86°50'13"



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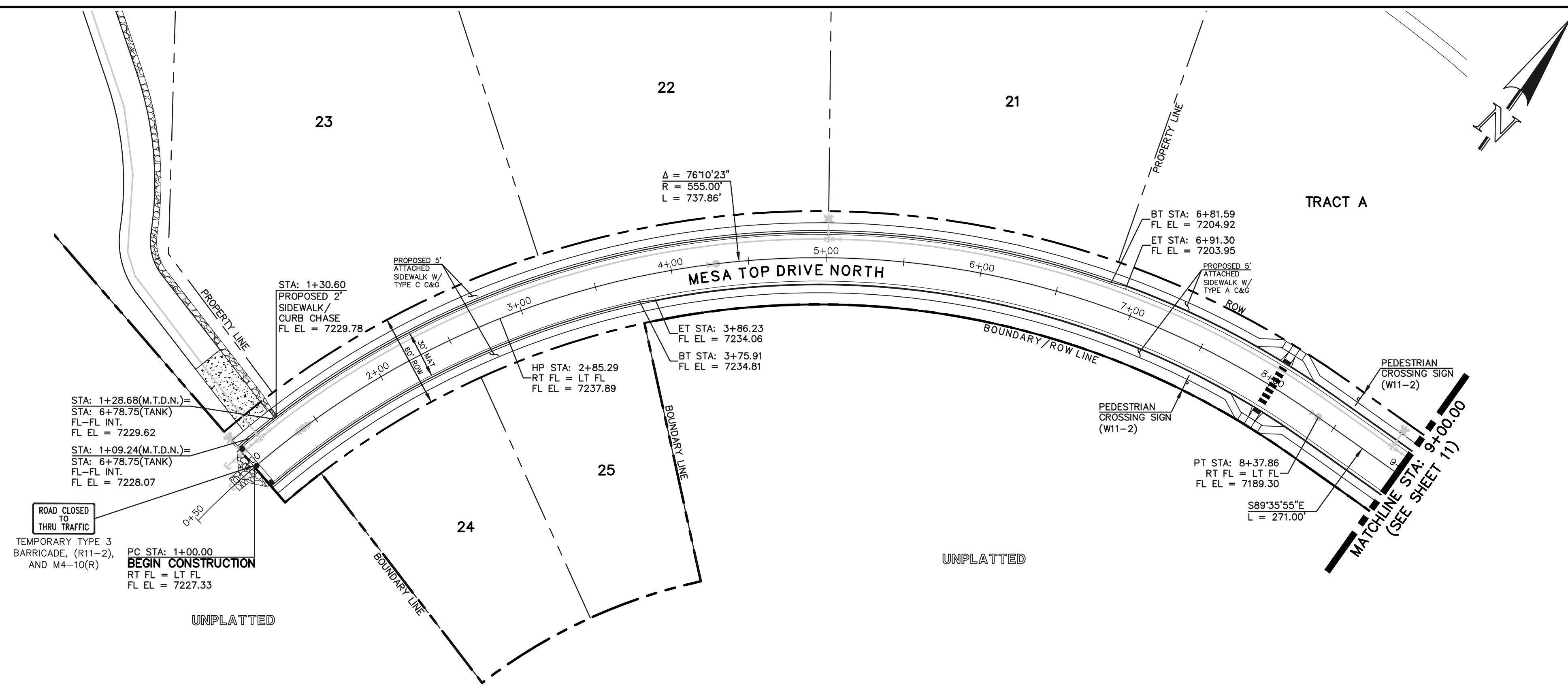
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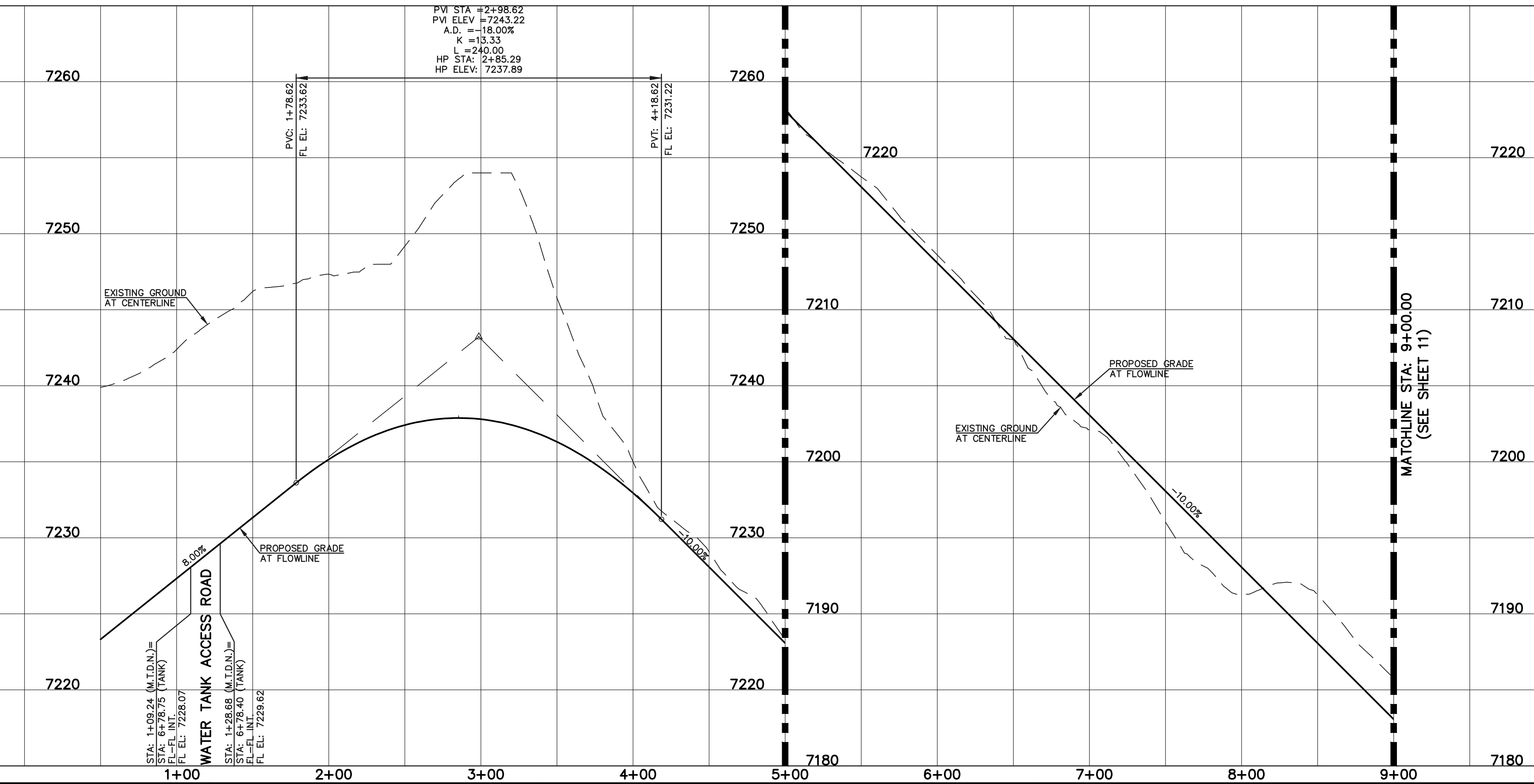
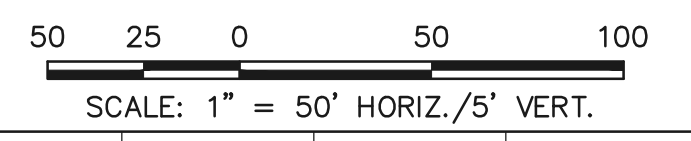
FOREST LAKES FILING NO. 6  
 PUBLIC STREET IMPROVEMENT PLAN  
 MESA TOP DRIVE SOUTH STA: 15+50.00 - END  
 TIMBER TREK WAY/TIMBER TREK CUL-DE-SAC  
 DESIGNED BY MAL SCALE DATE 08/04/2020  
 DRAWN BY MES (H) 1" = 50' SHEET 09 OF 25  
 CHECKED BY (V) 1" = 5' JOB NO. 1175.60

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**MESA TOP DRIVE NORTH (PUBLIC)**  
 (50' R.O.W./60' R.O.W. URBAN LOCAL)  
 DESIGN SPEED: 30 MPH



**STREET ABBREVIATION INDEX:**

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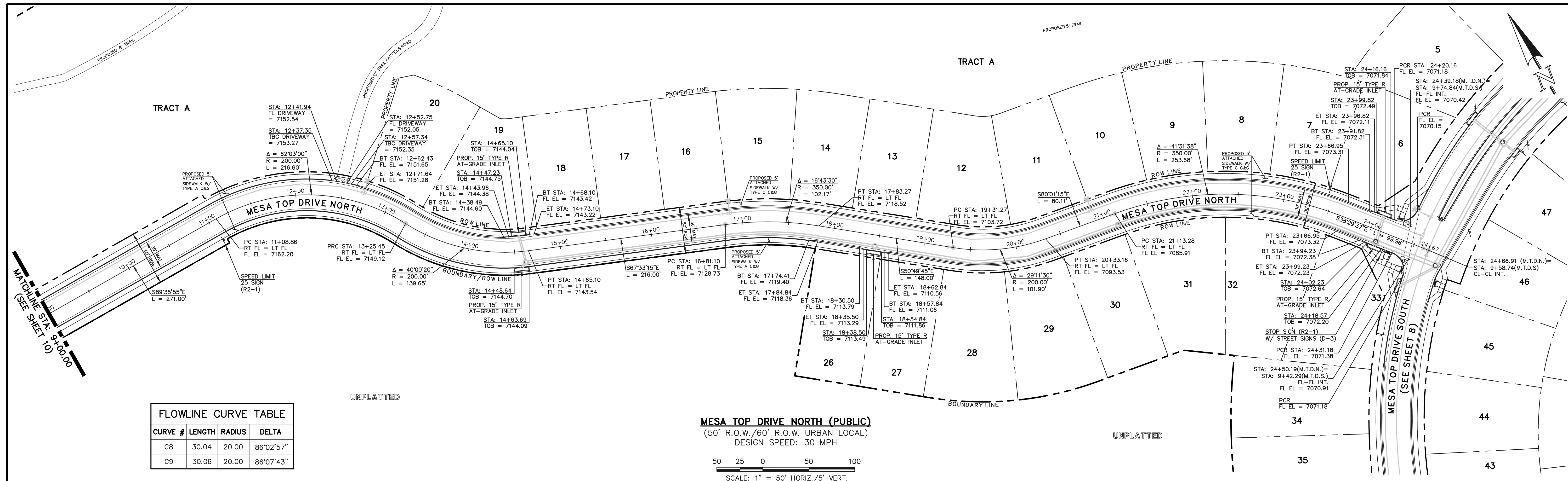
FOREST LAKES FILING NO. 6  
 PUBLIC STREET IMPROVEMENT PLAN

MESA TOP DRIVE NORTH STA: 1+00 - STA: 9+00

DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 50'	SHEET	10 OF 25
CHECKED BY	(V)	1" = 5'	JOB NO.	1175.60

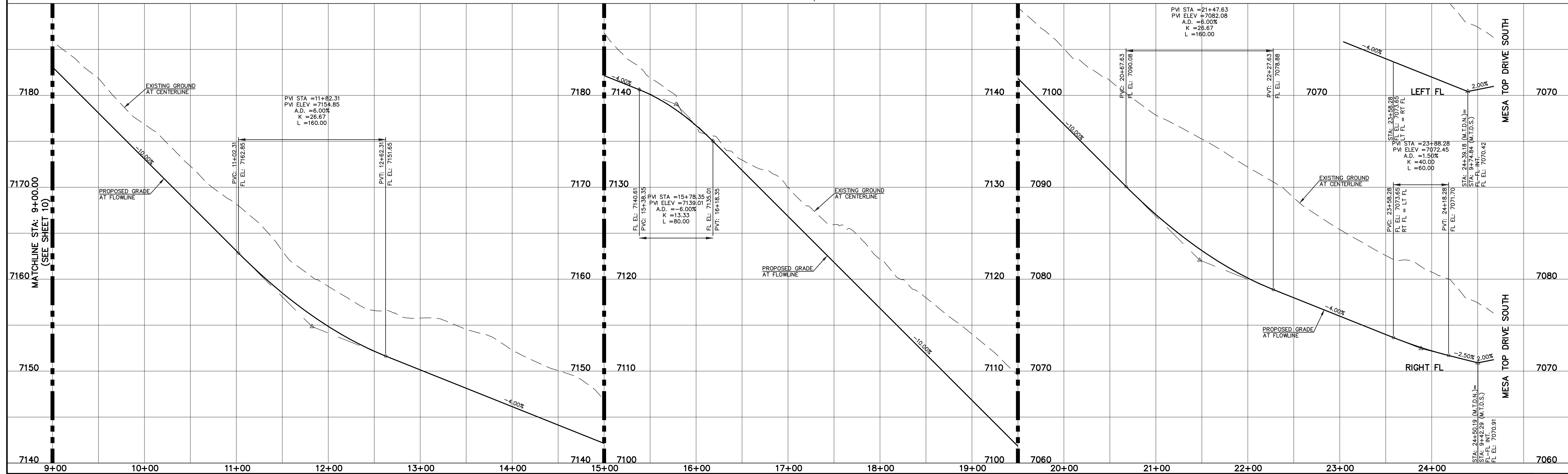
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**FLOWLINE CURVE TABLE**

CURVE #	LENGTH	RADIUS	DELTA
C8	30.04	20.00	86°02'57"
C9	30.06	20.00	86°07'43"



**STREET ABBREVIATION INDEX:**

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M.T.D.S.	MESA TOP DRIVE SOUTH
T.T.W.	TIMBER TREK WAY

**WALK CONSTRUCTION:**

4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & "ESTATE LOT" FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTIAL LOTS PER EL PASO COUNTY DIRECTION. 6" REQUIRED AT DRIVEWAY CONNECTIONS PER DETAILS SD 2-24 & SD 2-25 ON SHEET 6. WALK INSTALLED NOT AT 6" THICKNESS WILL BE RE-CONSTRUCTED WITH DRIVEWAY PERMIT AND INSTALLATION AS REQUIRED.

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS  
**811**  
 UTILITY NOTIFICATION CENTER OF COLORADO  
 IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794



FOREST LAKES FILING NO. 6  
 PUBLIC STREET IMPROVEMENT PLAN  
 MESA TOP DRIVE NORTH  
 STA. 9+00.00 - END

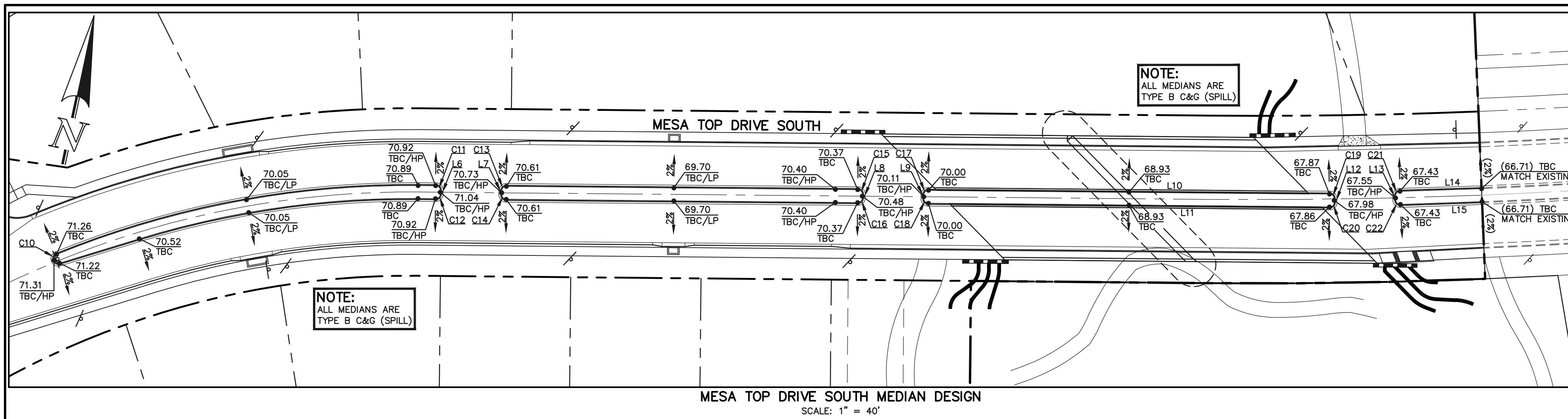
DESIGNED BY: MAL  
 DRAWN BY: MES  
 CHECKED BY:

SCALE: (H) 1" = 50'  
 (V) 1" = 5'

DATE: 08/04/2020  
 SHEET: 11 OF 25  
 JOB NO.: 1175.60

N:\117560\DRAWINGS\CONSTRUCTION\STREETS\11-117560-5-05.dwg, 10/26/2020, 3:35:35 PM, 1:1



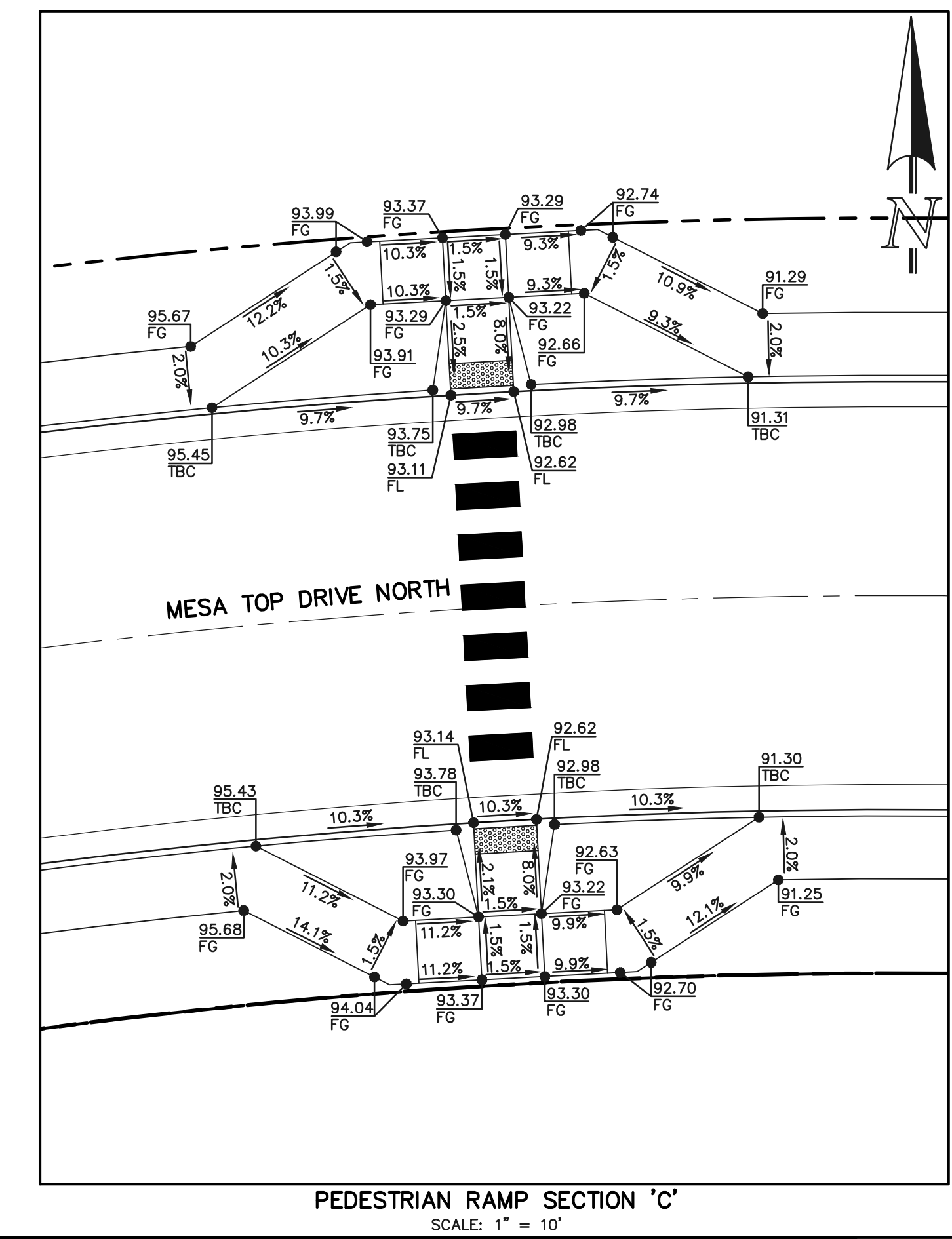
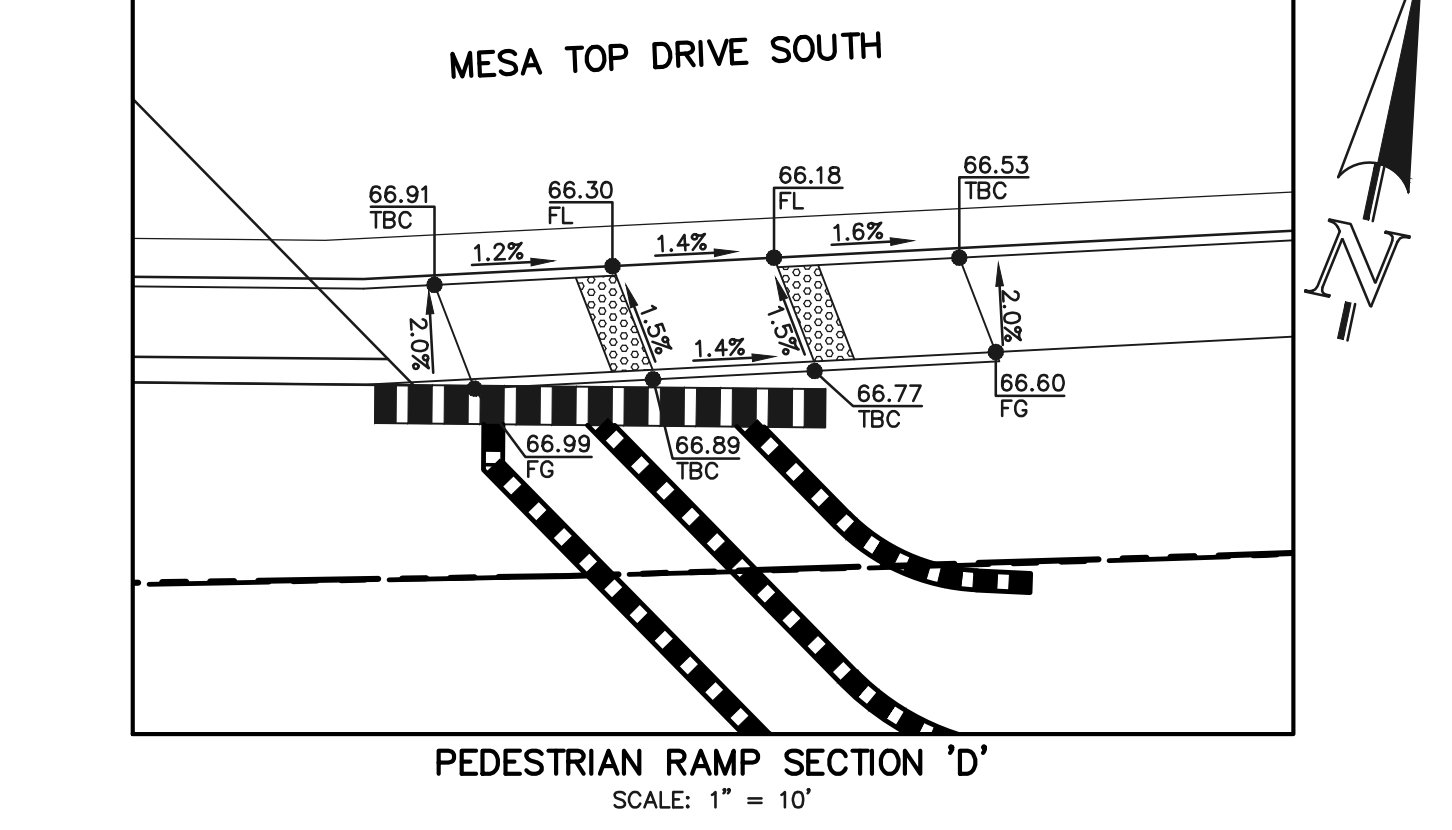
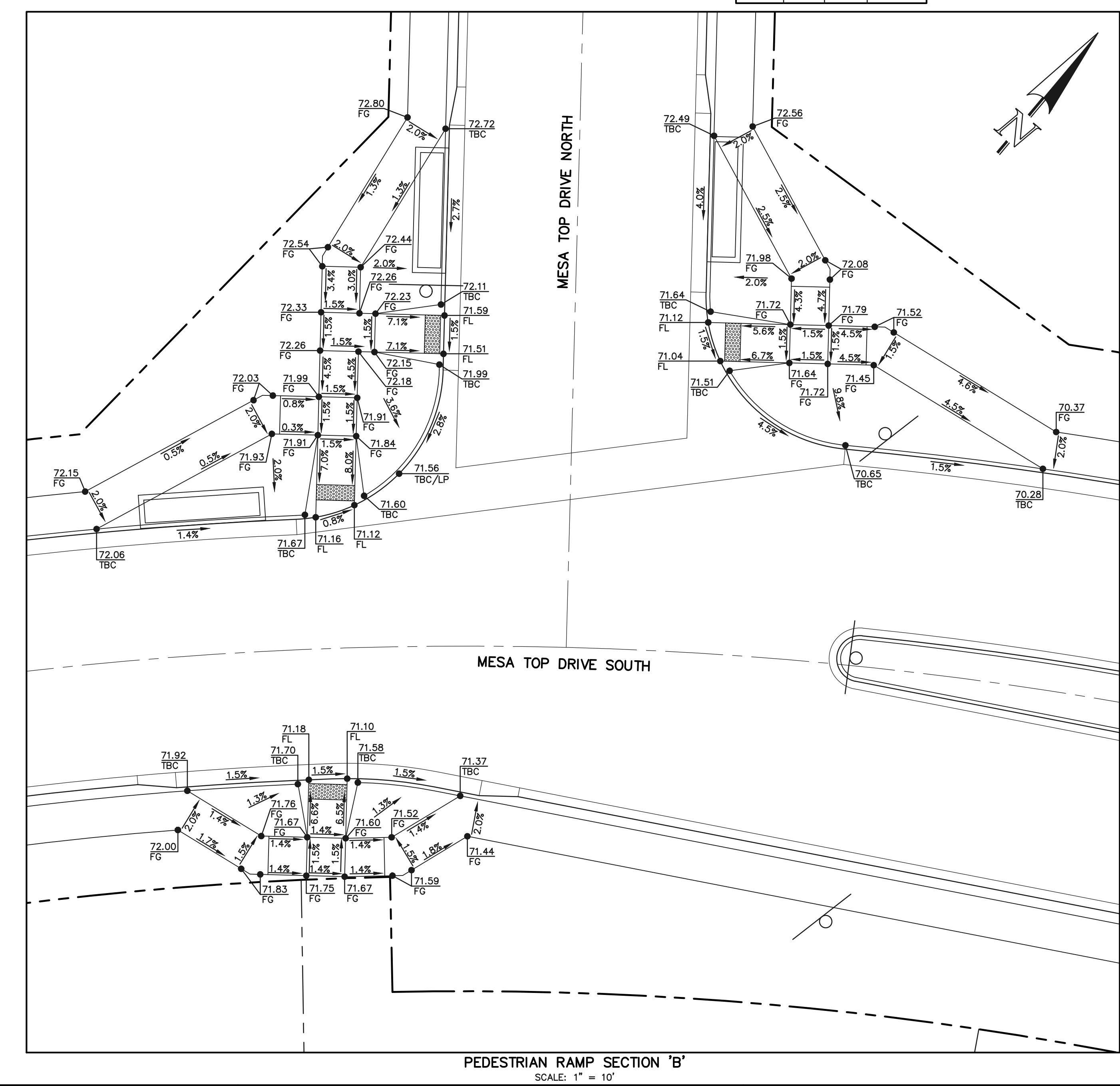
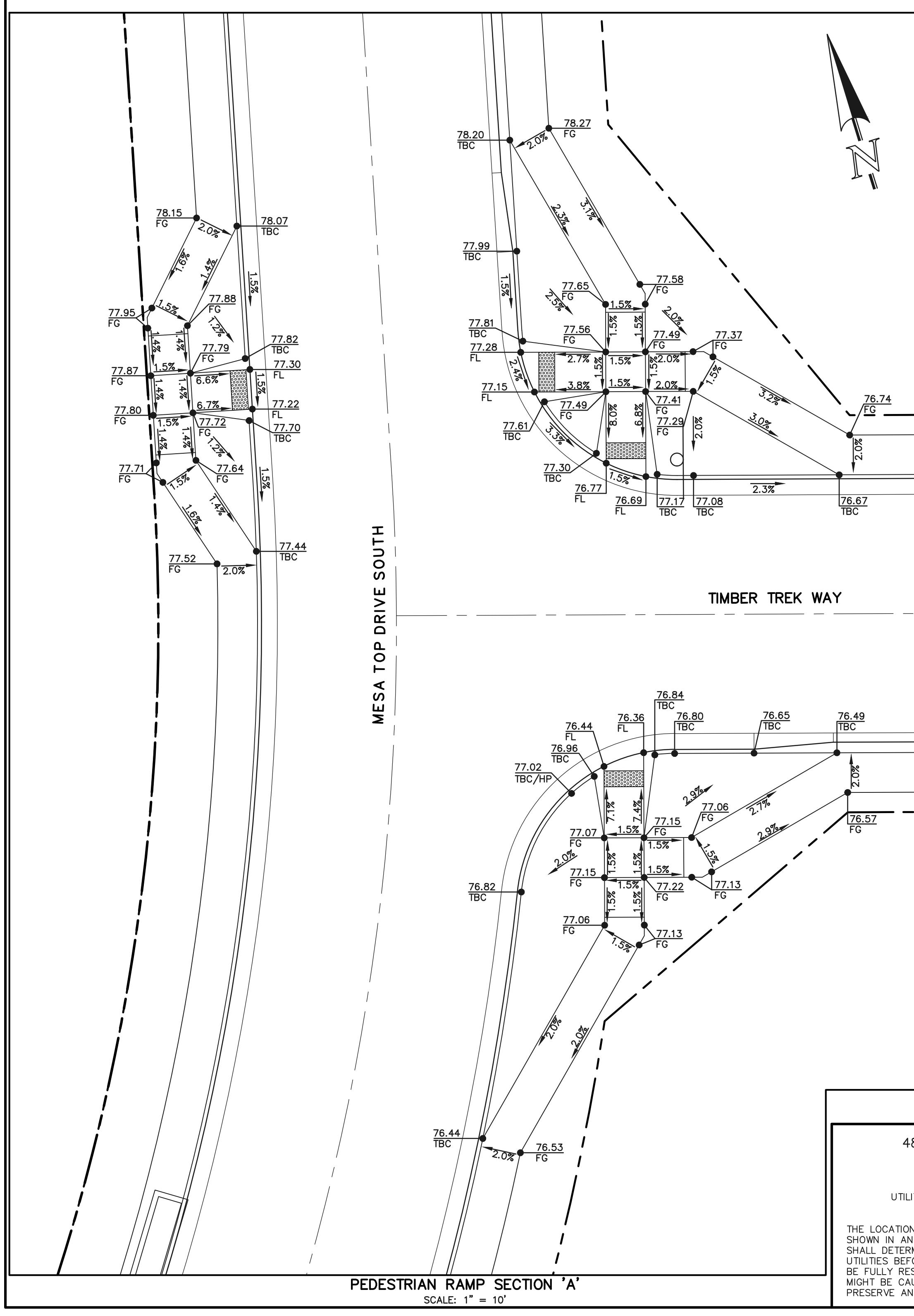
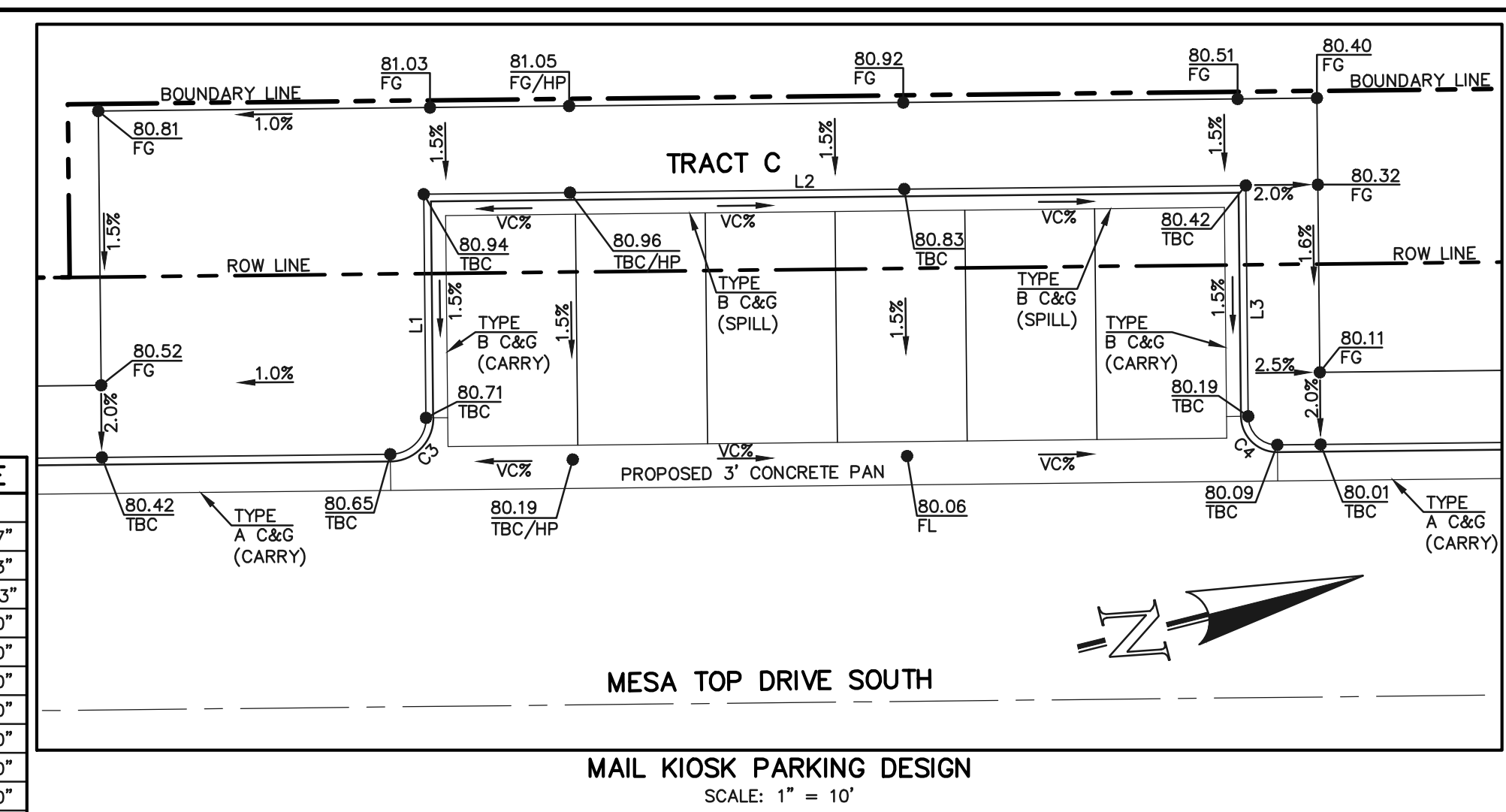


**FLOWLINE LINE TABLE**

LINE #	LENGTH	DIRECTION
L1	15.00	S76°36'10"E
L2	56.00	S13°23'20"W
L3	15.50	N76°36'10"W
L6	2.00	N11°27'50"W
L7	2.00	S11°27'50"E
L8	2.00	N11°27'50"W
L9	2.00	S11°27'50"E
L10	215.39	S78°32'10"W
L11	215.48	N78°32'10"E
L12	2.00	S14°00'00"E
L13	2.17	S13°59'00"E
L14	43.81	S76°14'10"W
L15	43.86	N76°01'00"E

**FLOWLINE CURVE TABLE**

CURVE #	LENGTH	RADIUS	DELTA
C3	4.71	3.00	89°59'27"
C4	3.93	2.50	90°00'33"
C10	9.16	3.00	174°52'43"
C11	4.71	3.00	90°00'00"
C12	4.71	3.00	90°00'00"
C13	4.71	3.00	90°00'00"
C14	4.71	3.00	90°00'00"
C15	4.71	3.00	90°00'00"
C16	4.71	3.00	90°00'00"
C17	4.71	3.00	90°00'00"
C18	4.71	3.00	90°00'00"
C19	4.58	3.00	87°27'07"
C20	4.85	3.00	92°32'53"
C21	4.72	3.00	90°13'04"
C22	4.71	3.00	90°00'00"



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NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF  
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

FOREST LAKES FILING NO. 6  
PUBLIC STREET IMPROVEMENT PLAN  
MEDIAN DESIGN, MAIL KIOSK PARKING DESIGN  
AND PEDESTRIAN RAMP DESIGN

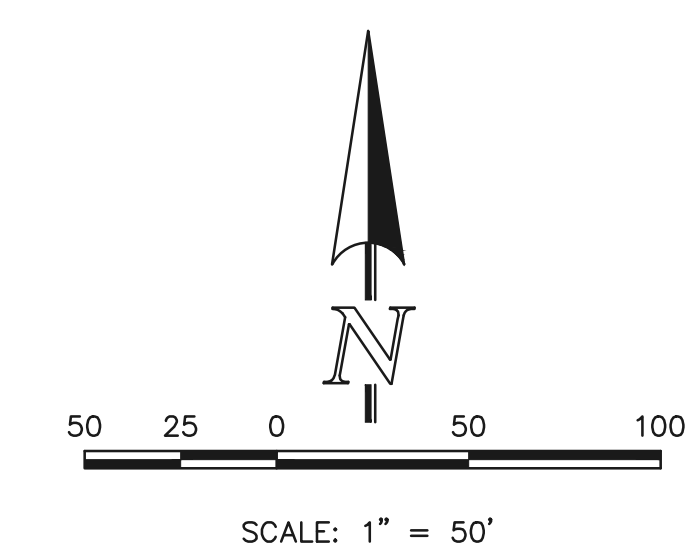
**CLASSIC CONSULTING**

DESIGNED BY: MAL      SCALE: DATE: 08/04/2020  
DRAWN BY: MES      (H) 1"=VARIES      SHEET 12 OF 25  
CHECKED BY:      (V) 1"=N/A      JOB NO. 1175.60

618 N. Cascade Avenue, Suite 200      (719)785-0790  
Colorado Springs, Colorado 80903      (719)785-0799(fax)

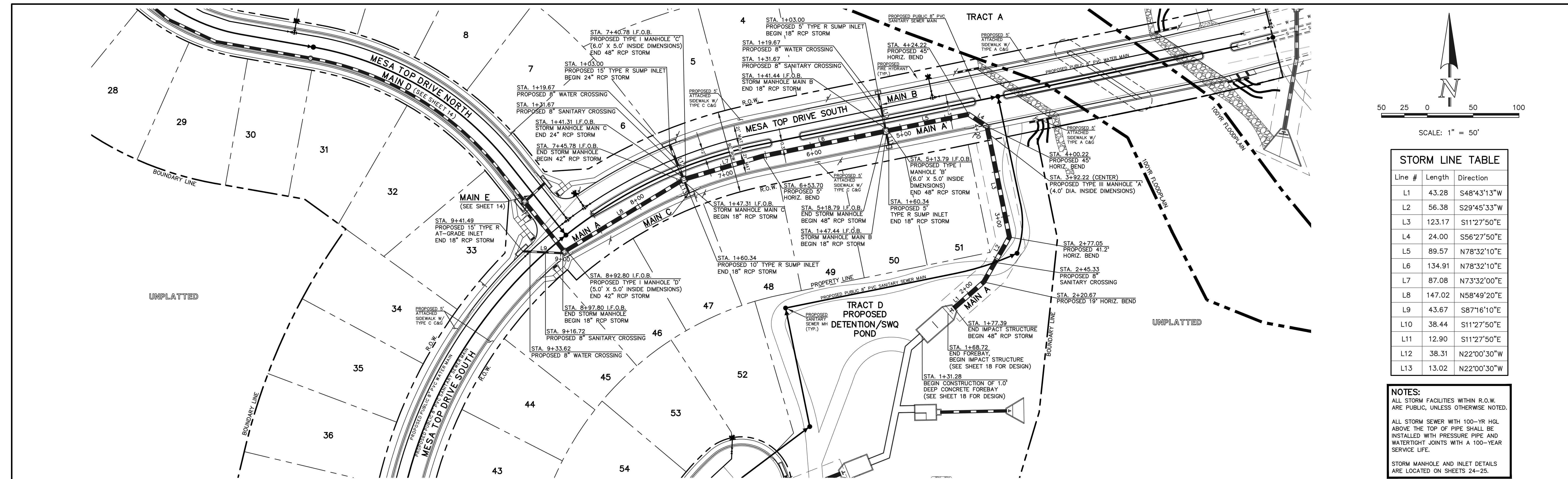
N:\117560\DRAWINGS\CONSTRUCTION\STREETS\11-117560-5-06.dwg, 10/26/2020 3:35:35 PM, 1:1





Line #	Length	Direction
L1	43.28	S48°43'13\"W
L2	56.38	S29°45'33\"W
L3	123.17	S11°27'50\"E
L4	24.00	S56°27'50\"E
L5	89.57	N78°32'10\"E
L6	134.91	N78°32'10\"E
L7	87.08	N73°32'00\"E
L8	147.02	N58°49'20\"E
L9	43.67	S87°16'10\"E
L10	38.44	S11°27'50\"E
L11	12.90	S11°27'50\"E
L12	38.31	N22°00'30\"W
L13	13.02	N22°00'30\"W

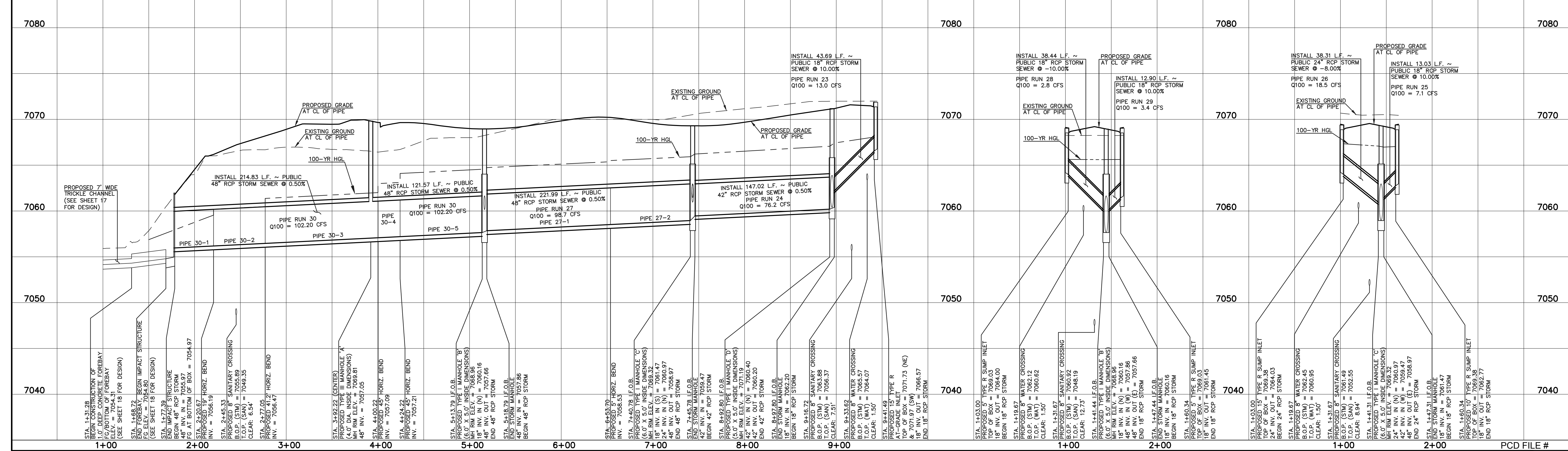
**NOTES:**  
 ALL STORM FACILITIES WITHIN R.O.W. ARE PUBLIC, UNLESS OTHERWISE NOTED.  
 ALL STORM SEWER WITH 100-YR HGL ABOVE THE TOP OF PIPE SHALL BE INSTALLED WITH PRESSURE PIPE AND WATERTIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.  
 STORM MANHOLE AND INLET DETAILS ARE LOCATED ON SHEETS 24-25.



**PUBLIC 18\"/>**

**PUBLIC 18\"/>**

**PUBLIC 18\"/>**



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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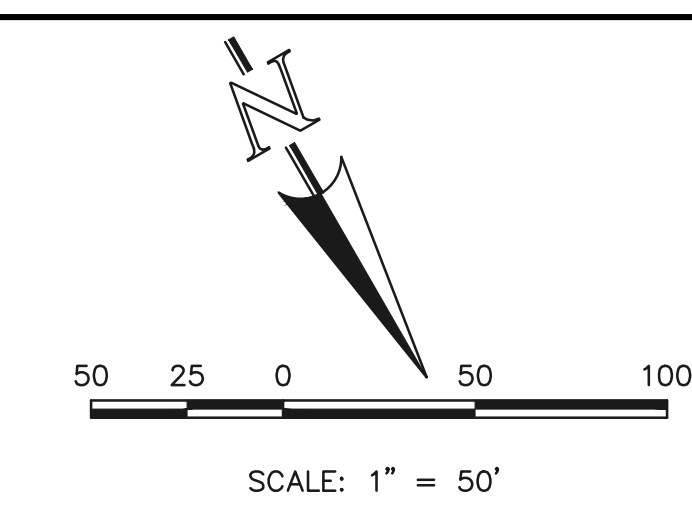
KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



<b>FOREST LAKES FILING NO. 6</b>			
<b>CONSTRUCTION PLANS</b>			
<b>PUBLIC STORM SEWER PLAN</b>			
<b>MAIN 'A' / MAIN 'B' / MAIN 'C'</b>			
DESIGNED BY	MAL	SCALE	DATE 08/04/2020
DRAWN BY	MES	(H) 1" = 50'	SHEET 13 OF 25
CHECKED BY	(V) 1" = 5'	JOB NO.	1175.60

N:\117560\DRAWINGS\CONSTRUCTION\STORM\13-117560-STM-01.dwg, 10/26/2020 3:40:50 PM, 1:1

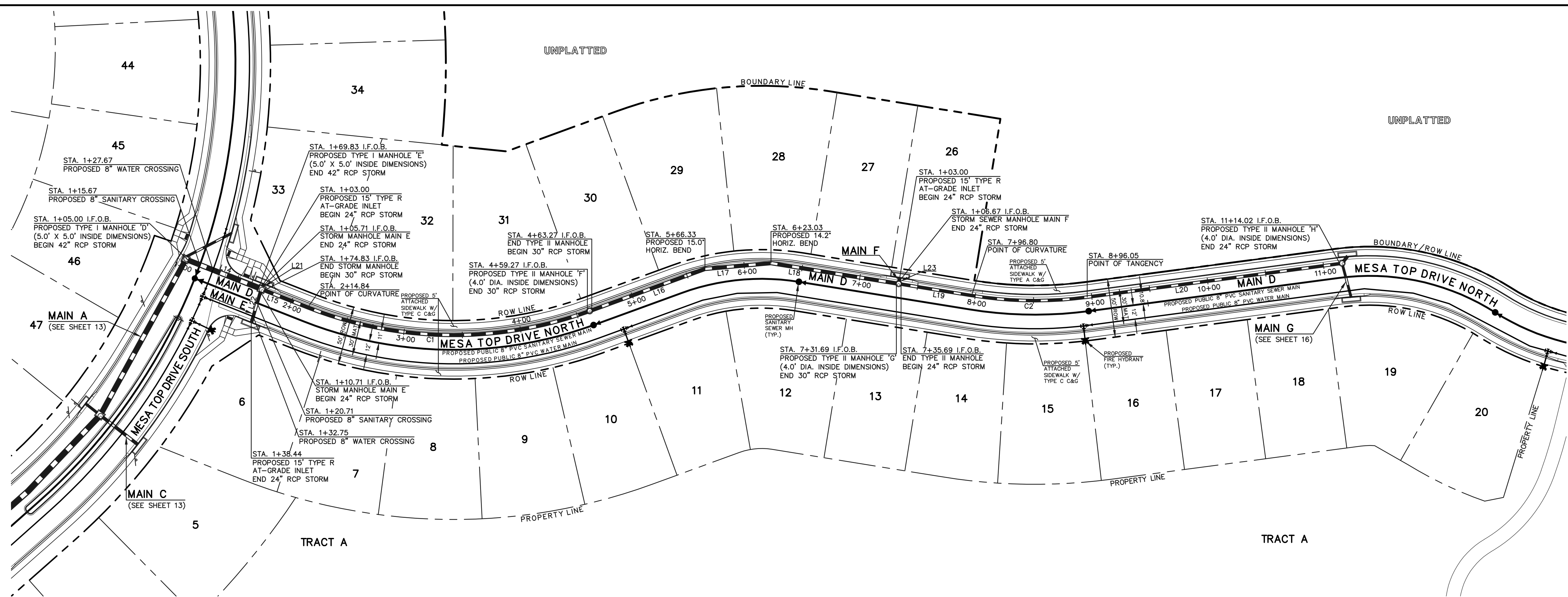




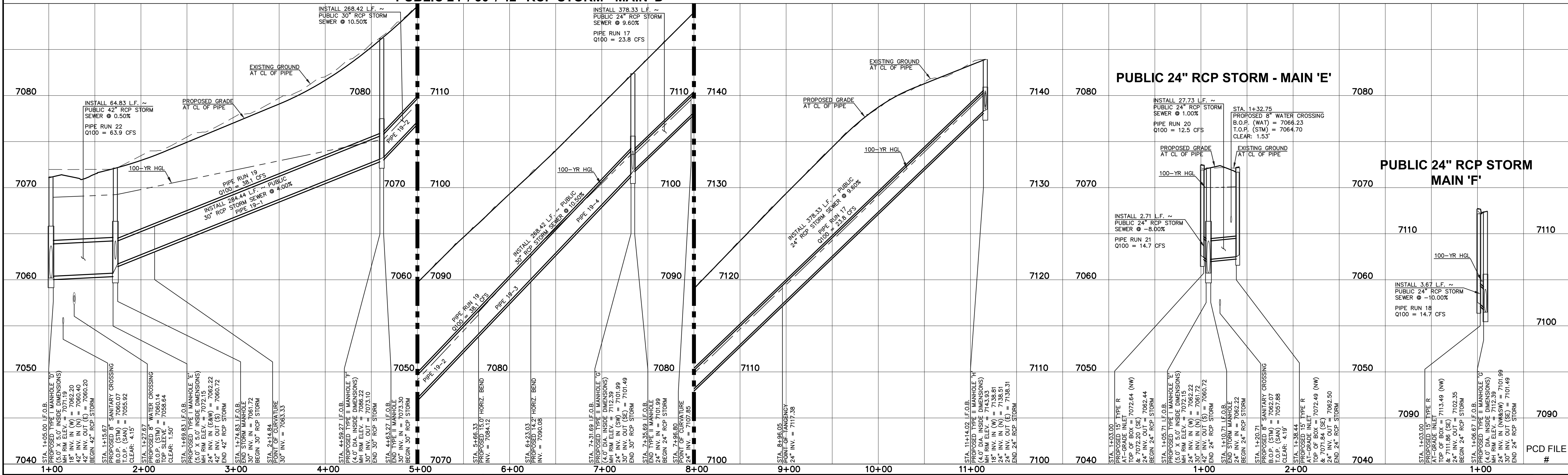
Line #	Length	Direction
L14	64.83	N38°29'40"W
L15	40.01	N38°29'40"W
L16	103.06	N80°01'10"W
L17	56.70	N65°01'10"W
L18	108.66	N50°49'40"W
L19	61.11	N50°49'40"W
L20	217.97	N67°33'10"W
L21	2.71	S51°30'20"W
L22	27.73	S46°31'40"W
L23	3.67	N39°10'20"E

Curve #	Length	Radius	Delta
C1	244.43	340.00	41°11'20"
C2	99.25	340.00	16°43'30"

**NOTES:**  
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 STORM MANHOLE AND INLET DETAILS ARE LOCATED ON SHEETS 24-25.

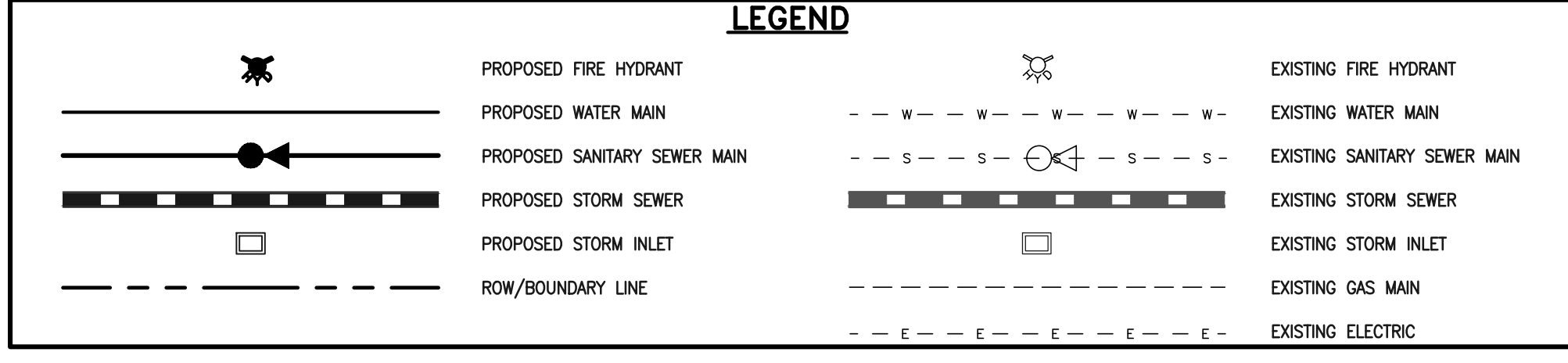


**PUBLIC 24"/ 30"/ 42" RCP STORM - MAIN 'D'**



**PUBLIC 24" RCP STORM - MAIN 'E'**

**PUBLIC 24" RCP STORM MAIN 'F'**



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KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

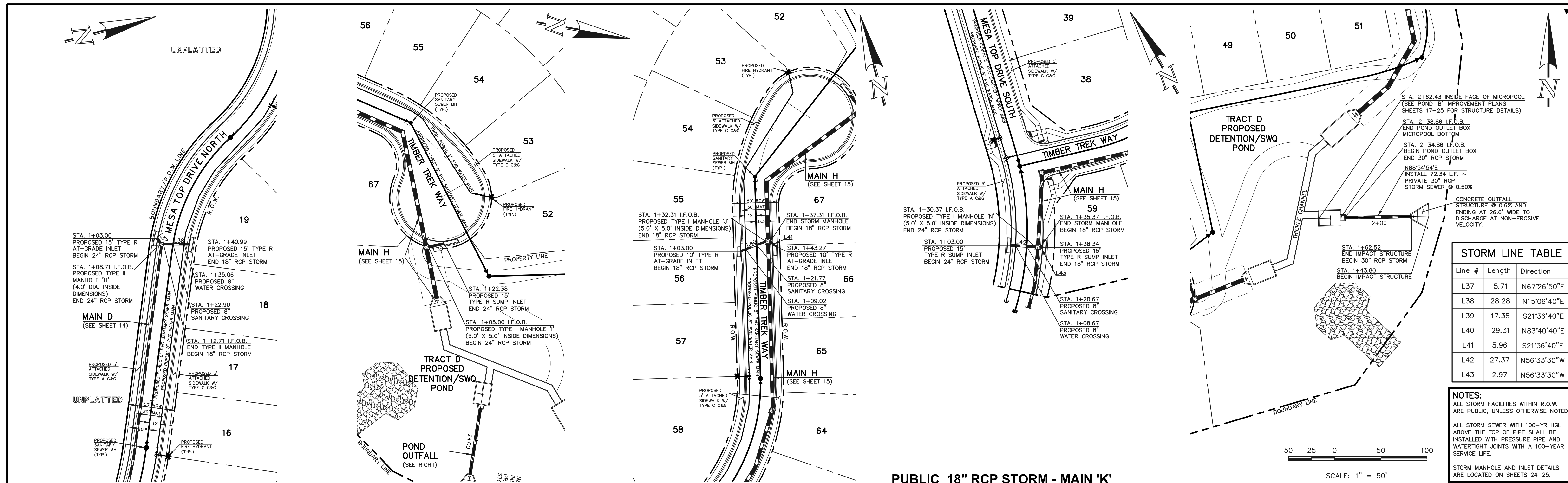
FOREST LAKES FILING NO. 6  
 CONSTRUCTION PLANS  
 PUBLIC STORM SEWER PLAN  
 MAIN 'D' / MAIN 'E' / MAIN 'F'

DESIGNED BY: MAL      SCALE:      DATE: 08/04/2020  
 DRAWN BY: MES      (H) 1" = 50'      SHEET 14 OF 25  
 CHECKED BY:      (V) 1" = 5'      JOB NO. 1175.60









Line #	Length	Direction
L37	5.71	N67°26'50"E
L38	28.28	N15°06'40"E
L39	17.38	S21°36'40"E
L40	29.31	N83°40'40"E
L41	5.96	S21°36'40"E
L42	27.37	N56°33'30"W
L43	2.97	N56°33'30"W

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 STORM MANHOLE AND INLET DETAILS ARE LOCATED ON SHEETS 24-25.

**PUBLIC 18" RCP STORM - MAIN 'K'**

Station	Public 18"/24" RCP Storm - Main 'G'	Public 24" RCP Storm Main 'I'	Public 18" RCP Storm Main 'J'	Public 18" RCP Storm - Main 'K'	Private 30" RCP Storm - Pond Outfall
7050	INSTALL 5.71 L.F. ~ PUBLIC 24" RCP STORM SEWER @ -10.00% PIPE RUN 15 Q100 = 16.4 CFS	INSTALL 17.38 L.F. ~ PUBLIC 24" RCP STORM SEWER @ 10.00% PIPE RUN 13 Q100 = 13.8 CFS	INSTALL 29.31 L.F. ~ PUBLIC 18" RCP STORM SEWER @ -1.00% PIPE RUN 10 Q100 = 6.9 CFS	INSTALL 27.37 L.F. ~ PUBLIC 24" RCP STORM SEWER @ -1.00% PIPE RUN 7 Q100 = 18.9 CFS	
7040					
7030					
7020					
7010					

**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	R/W/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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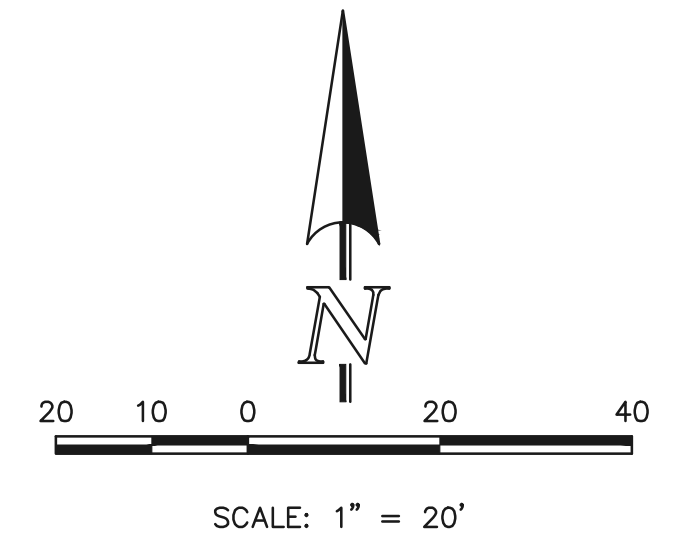
KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

FOREST LAKES FILING NO. 6  
 CONSTRUCTION PLANS  
 PUBLIC STORM SEWER PLAN  
 MAIN 'G'/'I'/'J'/'K'/ POND OUTFALL

**CLASSIC CONSULTING**

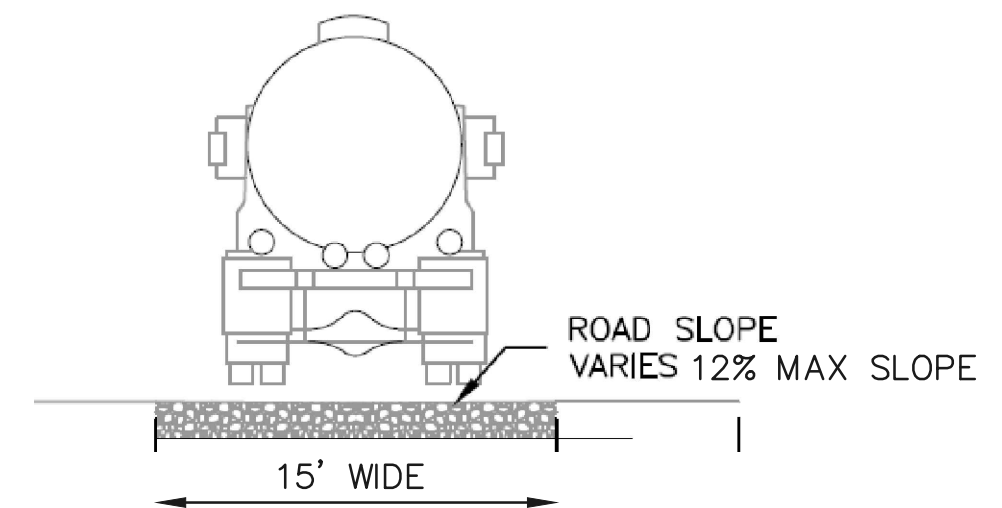
DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 50'	SHEET	16 OF 25
CHECKED BY	(V) 1" = 5'	JOB NO.	1175.60	



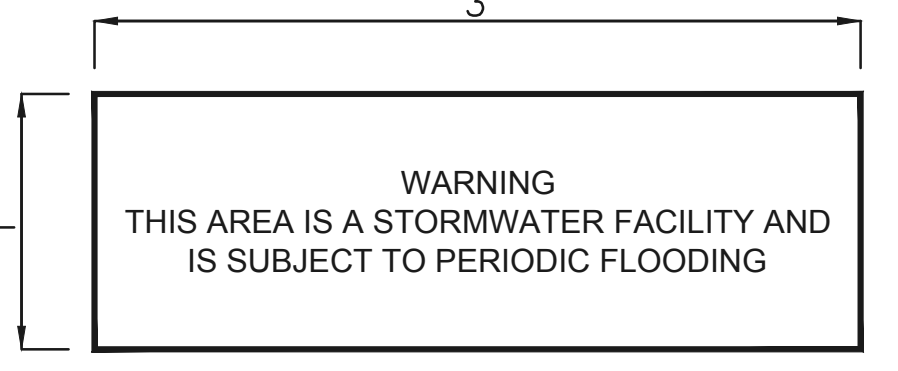


**NOTE:**  
POND BOTTOM TO SLOPE TOWARD TRICKLE CHANNEL AT 4% FOR FIRST 25' AND 1% THEREAFTER TO EDGE OF POND BOTTOM

**ACCESS ROAD**

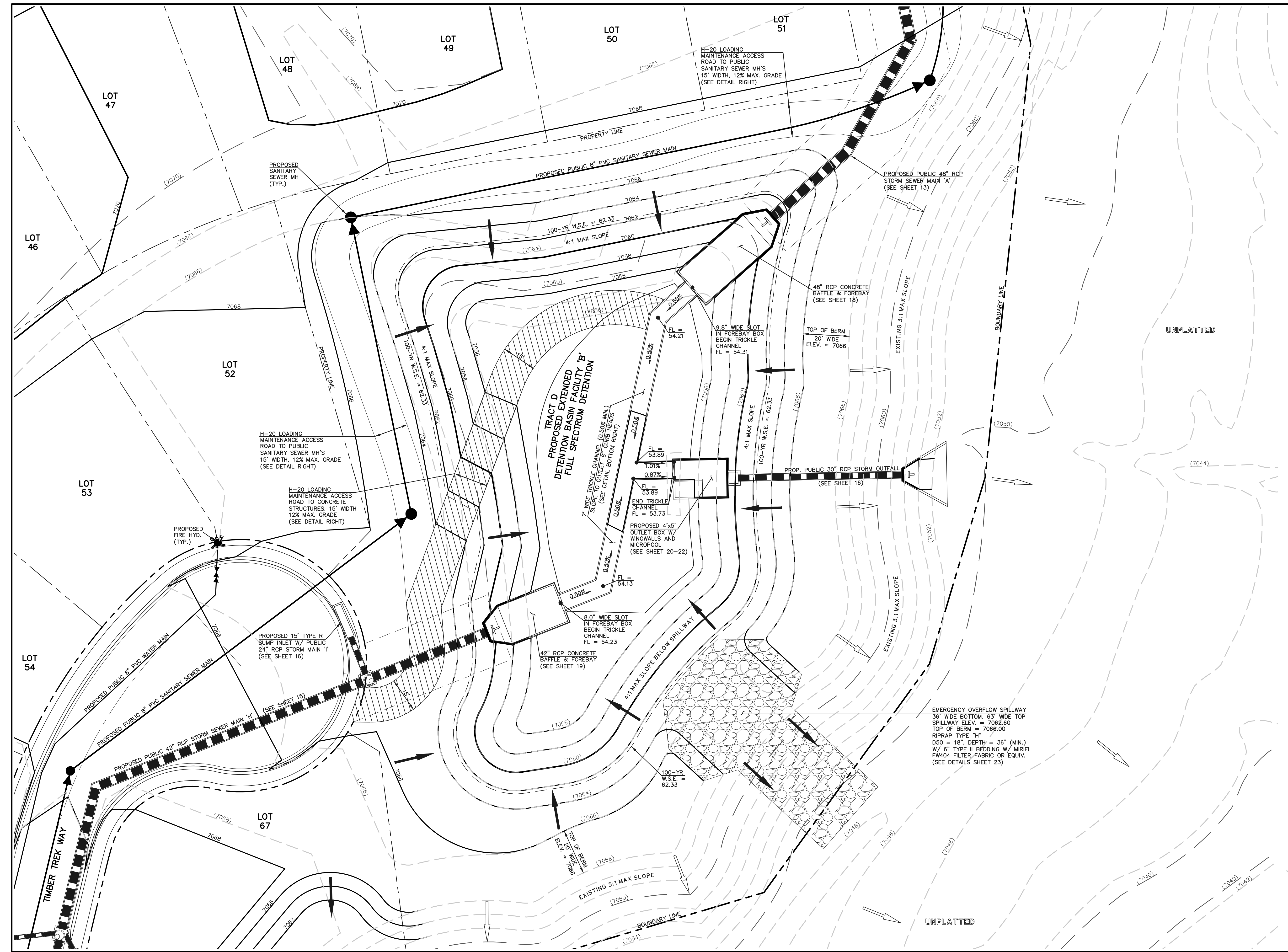
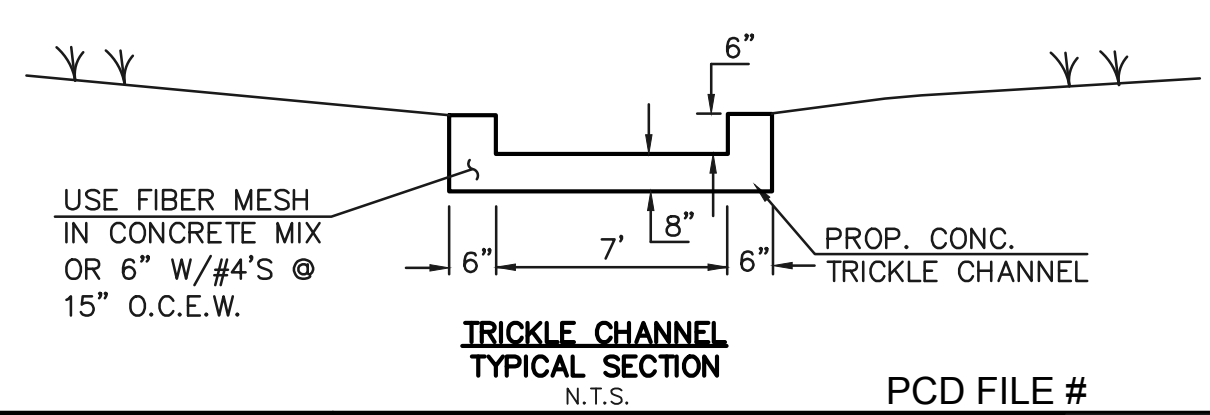


12" LAYER OF AGGREGATE BASE COURSE OR CRUSHED GRAVEL OVER COMPACTED SUBGRADE TO ELEVATION 7035.00 (EURV ELEVATION)  
8" LAYER OF AGGREGATE BASE COURSE OR CRUSHED GRAVEL ABOVE 7035.00.



**SIGN A**

**NOTES:**  
PROPOSED SIGN SHALL BE FABRICATED OF DURABLE MATERIALS, SUCH AS METAL OR PLASTIC, USING RED LETTERING ON A WHITE BACKGROUND



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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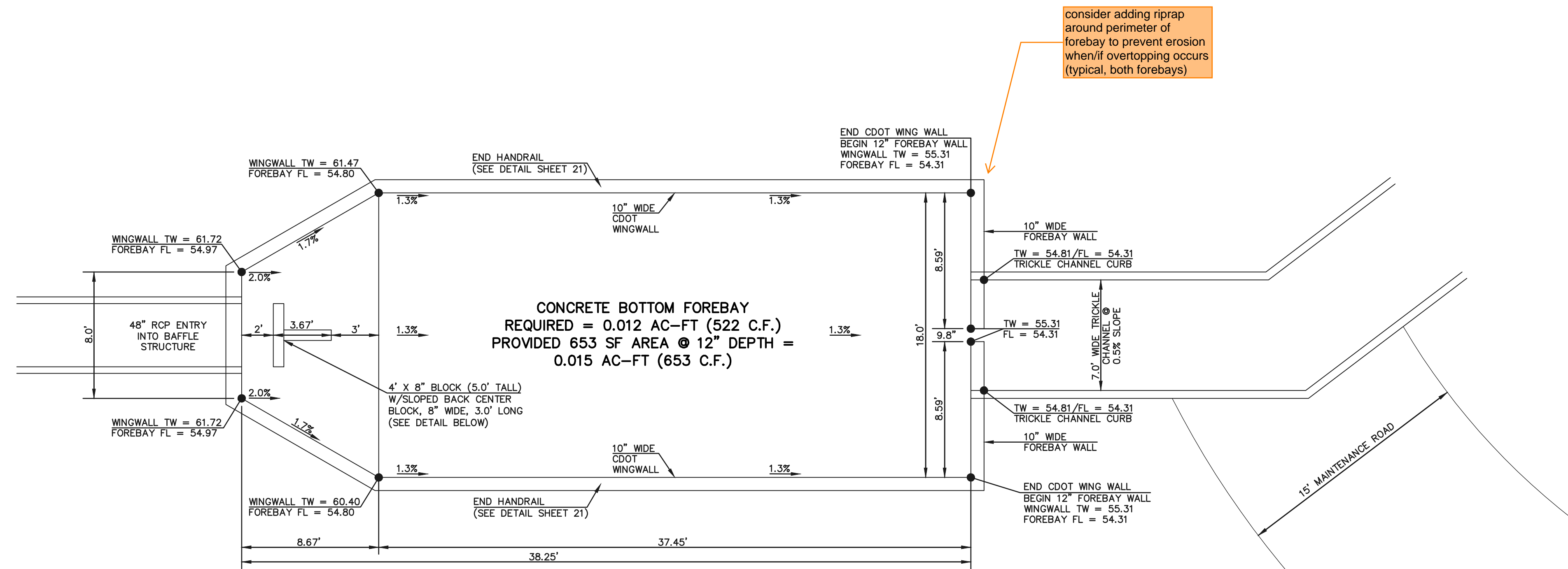
KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

FOREST LAKES FILING NO. 6  
CONSTRUCTION PLANS  
PRIVATE POND 'B'  
EDB - FULL SPECTRUM DETENTION

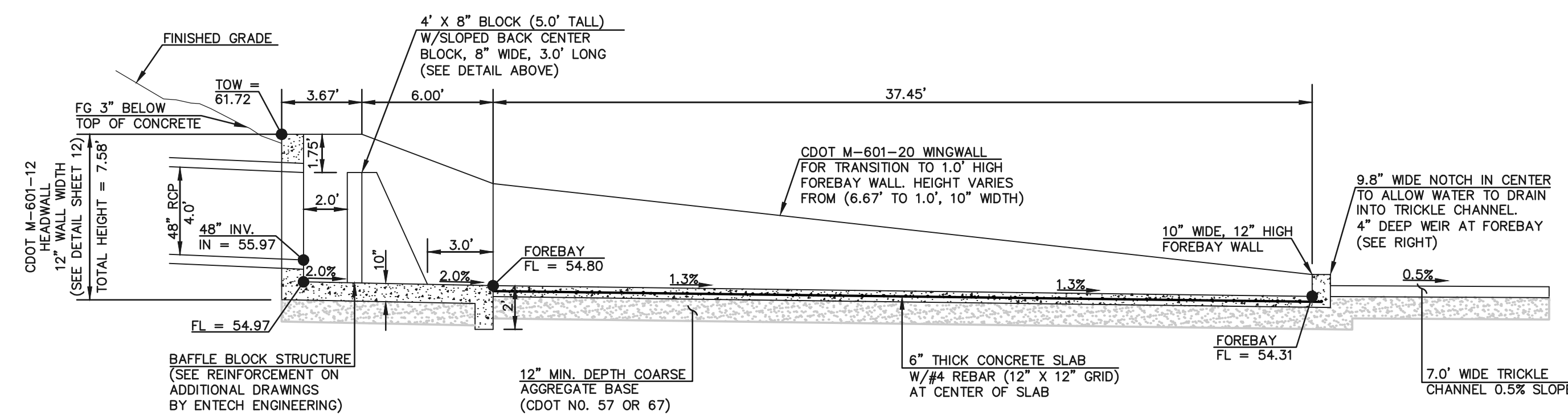
DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 20'	SHEET	17 OF 25
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.60	

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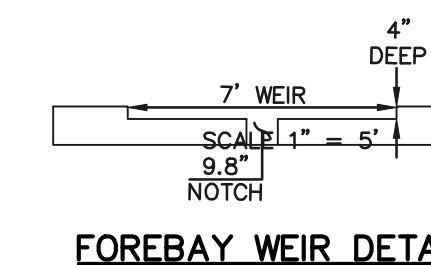




MAIN 'A' 48" RCP FOREBAY & BAFFLE STRUCTURE - PLAN VIEW  
SCALE 1" = 5'



MAIN 'A' 48" RCP FOREBAY & BAFFLE STRUCTURE - PROFILE VIEW  
SCALE 1" = 5'



FOREBAY WEIR DETAIL

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KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



PCD FILE #

FOREST LAKES FILING NO. 6  
CONSTRUCTION PLAN

MAIN 'A' - 48" IMPACT STRUCTURE

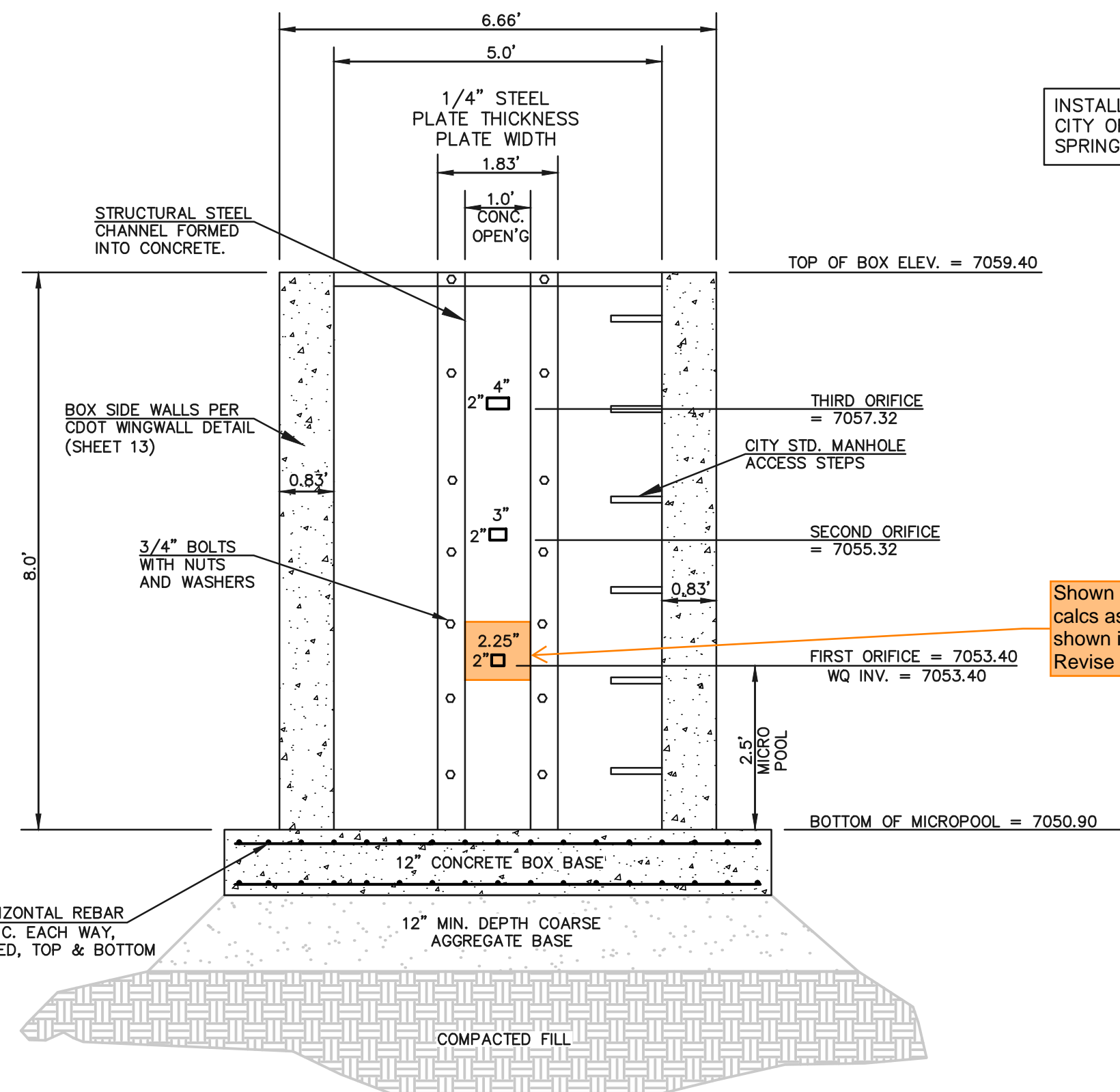
DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 5'	SHEET	18 OF 25
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.60	

619 N. Cascade Avenue, Suite 200      (719) 785-0790  
Colorado Springs, Colorado 80903      (719) 785-0799 (fax)

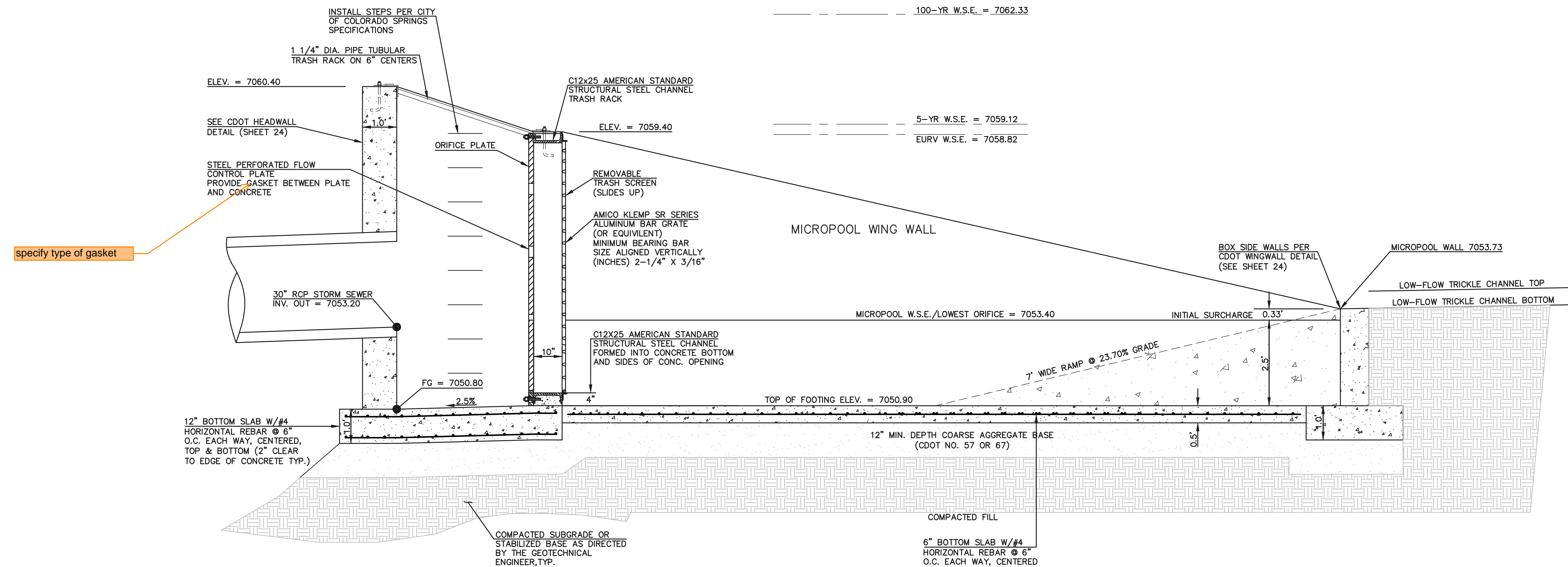








**5'x4' OUTLET BOX ORIFICE PLATE**  
SCALE 1" = 2'



**5'x4' OUTLET BOX MICRO POOL**  
SCALE 1" = 2'

<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b></p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	NO. REVISION	DATE	REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



PCD FILE #

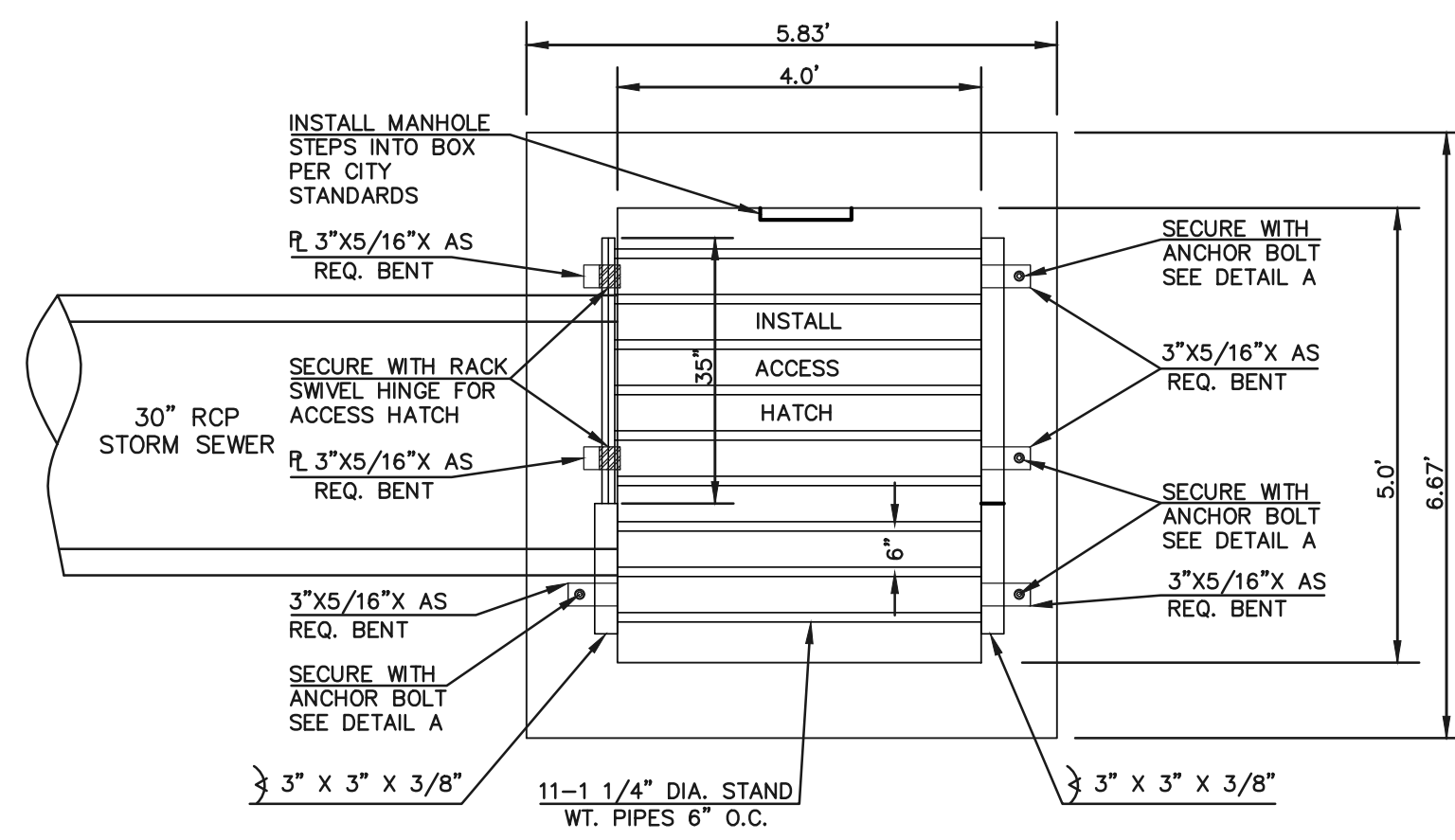
FOREST LAKES FILING NO. 6  
CONSTRUCTION PLAN

POND OUTLET BOX - PROFILE VIEW

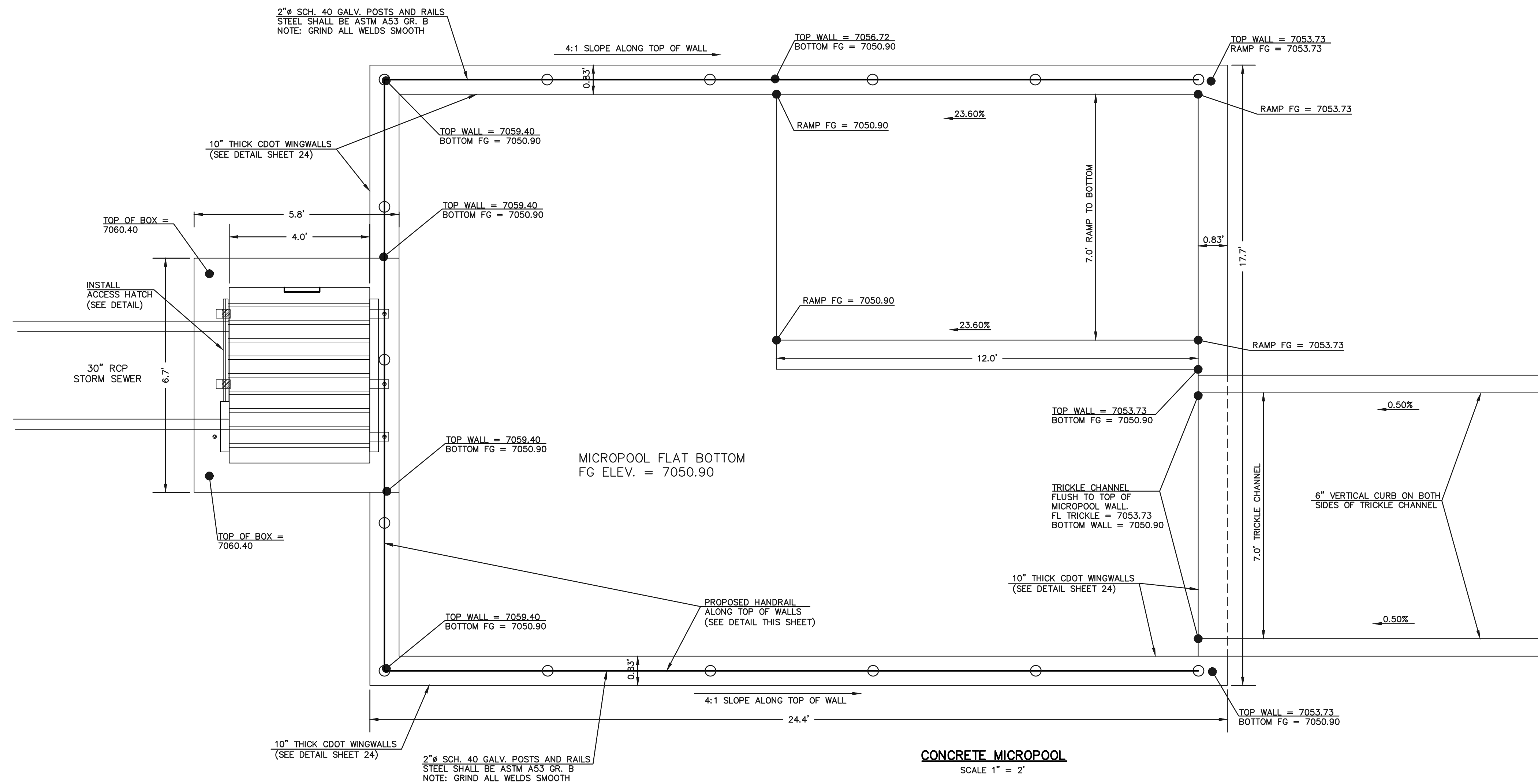
DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1" = 2'	SHEET	20 OF 25
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.60	

N:\117560\DRAWINGS\CONSTRUCTIVE\STORM\30-117560-31A-05-outlet structures.dwg, 10/26/2020 4:21:53 PM, 1:1





**5'X4' OUTLET BOX OVERFLOW TRASH RACK**  
SCALE 1" = 2'



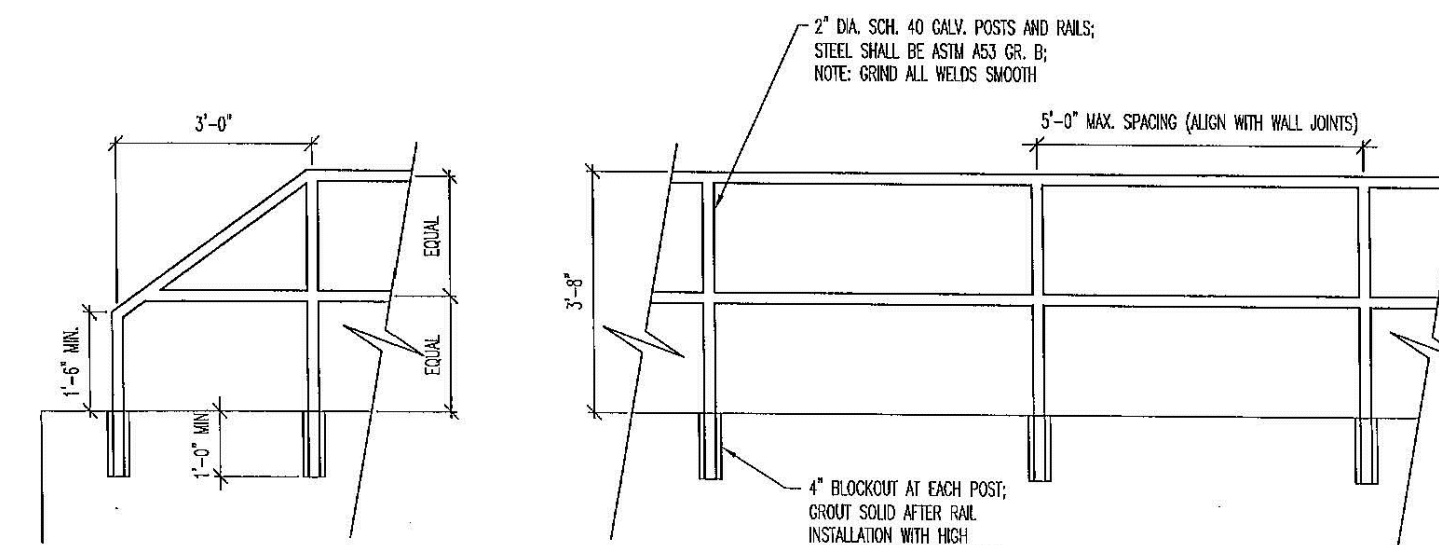
**CONCRETE MICROPOOL**  
SCALE 1" = 2'

**STEEL FABRICATION NOTES:**

- FABRICATED STEEL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC AND AWS SPECIFICATIONS.
- THE OUTLET STRUCTURE BARGRATE IS DESIGNED FOR A VERTICAL LOAD OF 300 LBS./SQ. FT.
- ALL STRUCTURAL STEEL SHAPES TO INCLUDE: ANGLE, PLATE, AND BAR SHALL MEET ASTM A36 SPECIFICATIONS, FY = 36 KSI MINIMUM. STRUCTURAL TUBING SHALL MEET ASTM A500 GRADE B SPECIFICATIONS, FY = 48 KSI MINIMUM. STEEL PIPE SHALL BE STANDARD WEIGHT PIPE ASTM A53 GRADE B, FY = 35 KSI MINIMUM.
- WELDS NOT INDICATED SHALL BE 1/8" MINIMUM FILLET OR GROOVE, CONTINUOUS SO FAR AS POSSIBLE, CONSIDER VANDALISM LOADS, WELD ACCORDINGLY AT CRITICAL LOCATIONS.
- PRIOR TO PAINTING REMOVE ALL OIL, SCALE, AND SLAG, GRIND OFF BURRS AND SHARP EDGES.
- PAINT WITH ONE SHOP COAT OF ZINC RICH PRIMER AND TWO COATS OF ALUMINUM PAINT, AASHTO M-69

**OVERFLOW TRASH RACKS:**

- ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE ACCESS PANELS (AS SHOWN)
- TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
- TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
- STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

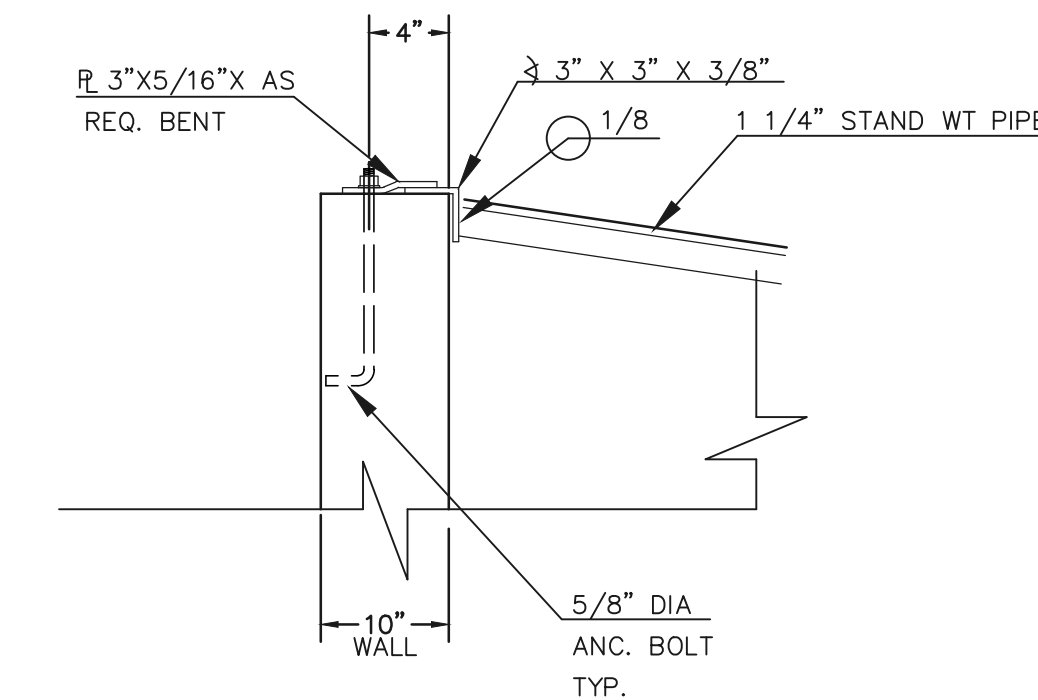


**MICROPOOL RAILING**

**NOTES:**

- WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
- HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
- RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.
- ALL RAILS SHALL HAVE EXPANSION JOINTS SPACED AT 40'-0" MAX. JOINT ENDS SHALL BE FREE OF ANY SHARP EDGES OR CORNERS.
- HANDRAIL FINISH SHALL BE ONE COAT RED METAL PRIMER AND TWO COATS ENAMEL (RUSTOLEUM OR EQUIVALENT). COLOR SHALL BE APPROVED BY ENGINEER PRIOR TO APPLICATION.

**INLET/OUTLET BOX RAILING**  
N.T.S.

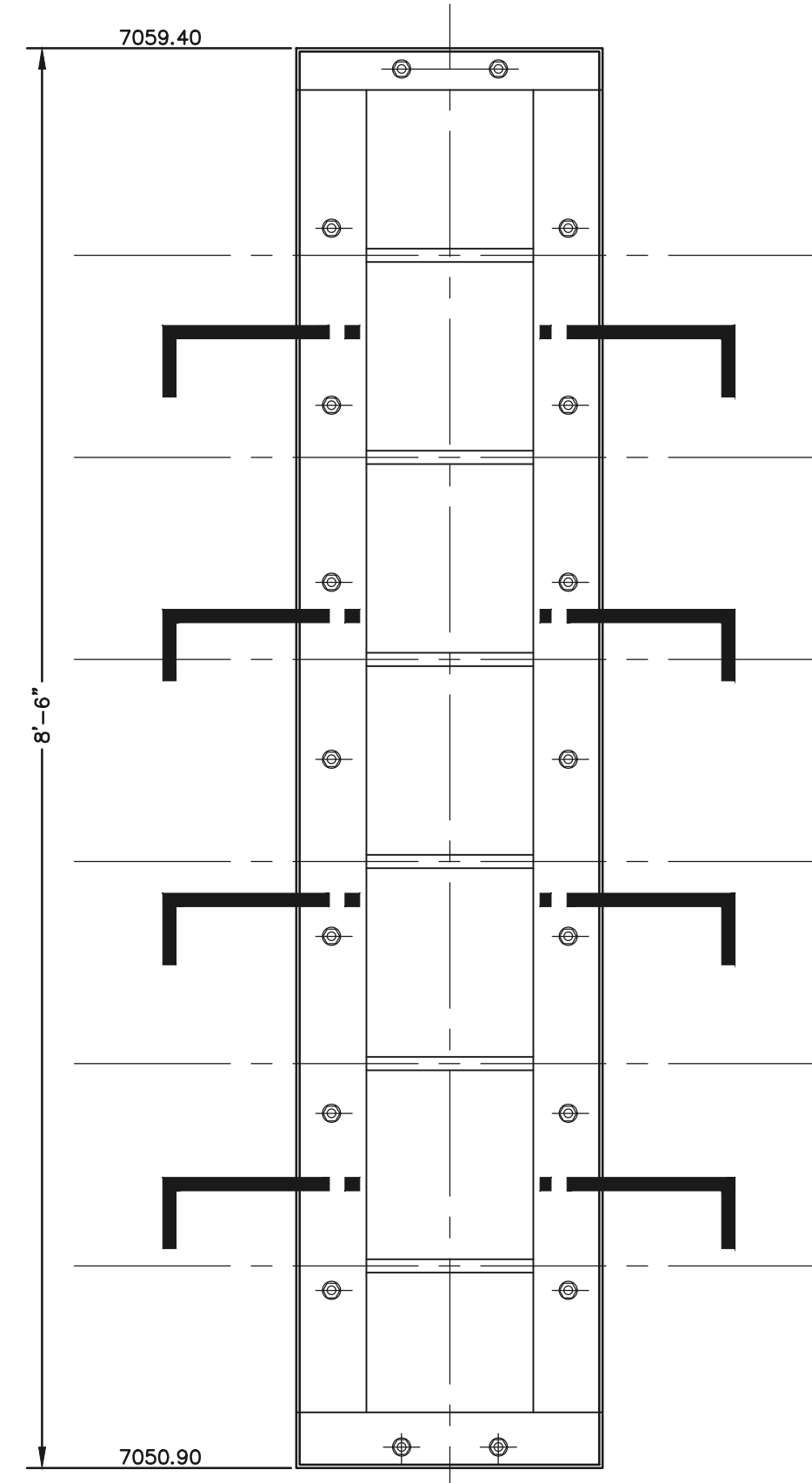


**ANCHOR BOLT/WALL DETAIL**  
N.T.S.

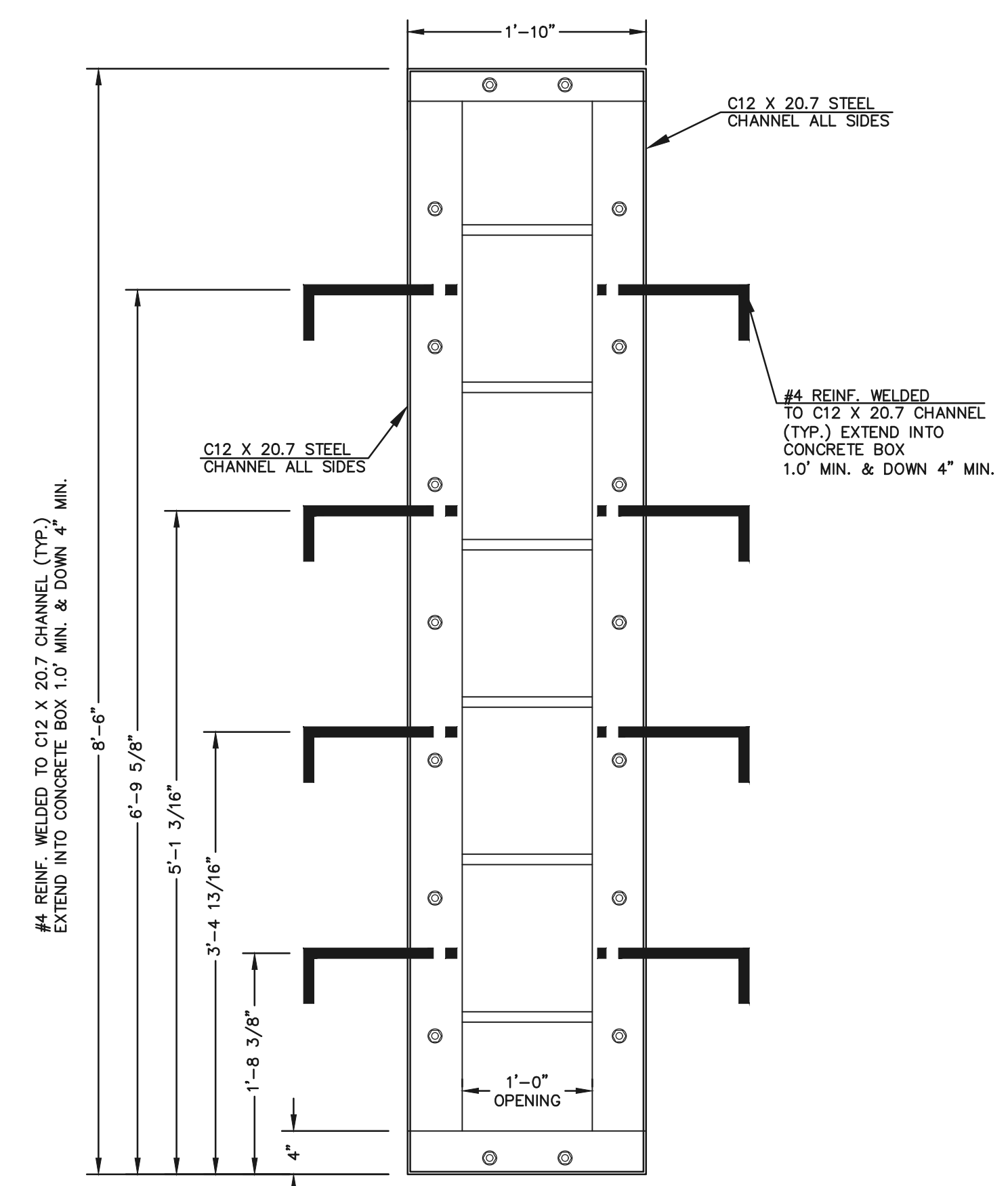
<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b></p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>													<p>DATE</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>													<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>KYLE R. CAMPBELL, COLORADO P.E. #29794</p>	<p>DATE</p>	<p>PCD FILE #</p>
<p>FOREST LAKES FILING NO. 6 CONSTRUCTION PLAN</p> <p>POND OUTLET BOX AND MICROPOOL DETAILS</p> <table border="1"> <tr> <td>DESIGNED BY</td> <td>MAL</td> <td>SCALE</td> <td>DATE</td> <td>08/04/2020</td> </tr> <tr> <td>DRAWN BY</td> <td>MES</td> <td>(H) 1" = 2'</td> <td>SHEET</td> <td>21 OF 25</td> </tr> <tr> <td>CHECKED BY</td> <td> </td> <td>(V) 1" = N/A</td> <td>JOB NO.</td> <td>1175.60</td> </tr> </table>	DESIGNED BY	MAL	SCALE	DATE	08/04/2020	DRAWN BY	MES	(H) 1" = 2'	SHEET	21 OF 25	CHECKED BY		(V) 1" = N/A	JOB NO.	1175.60	<p>CLASSIC CONSULTING</p> <p>619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719) 785-0790 (719) 785-0799 (fax)</p>													
DESIGNED BY	MAL	SCALE	DATE	08/04/2020																									
DRAWN BY	MES	(H) 1" = 2'	SHEET	21 OF 25																									
CHECKED BY		(V) 1" = N/A	JOB NO.	1175.60																									

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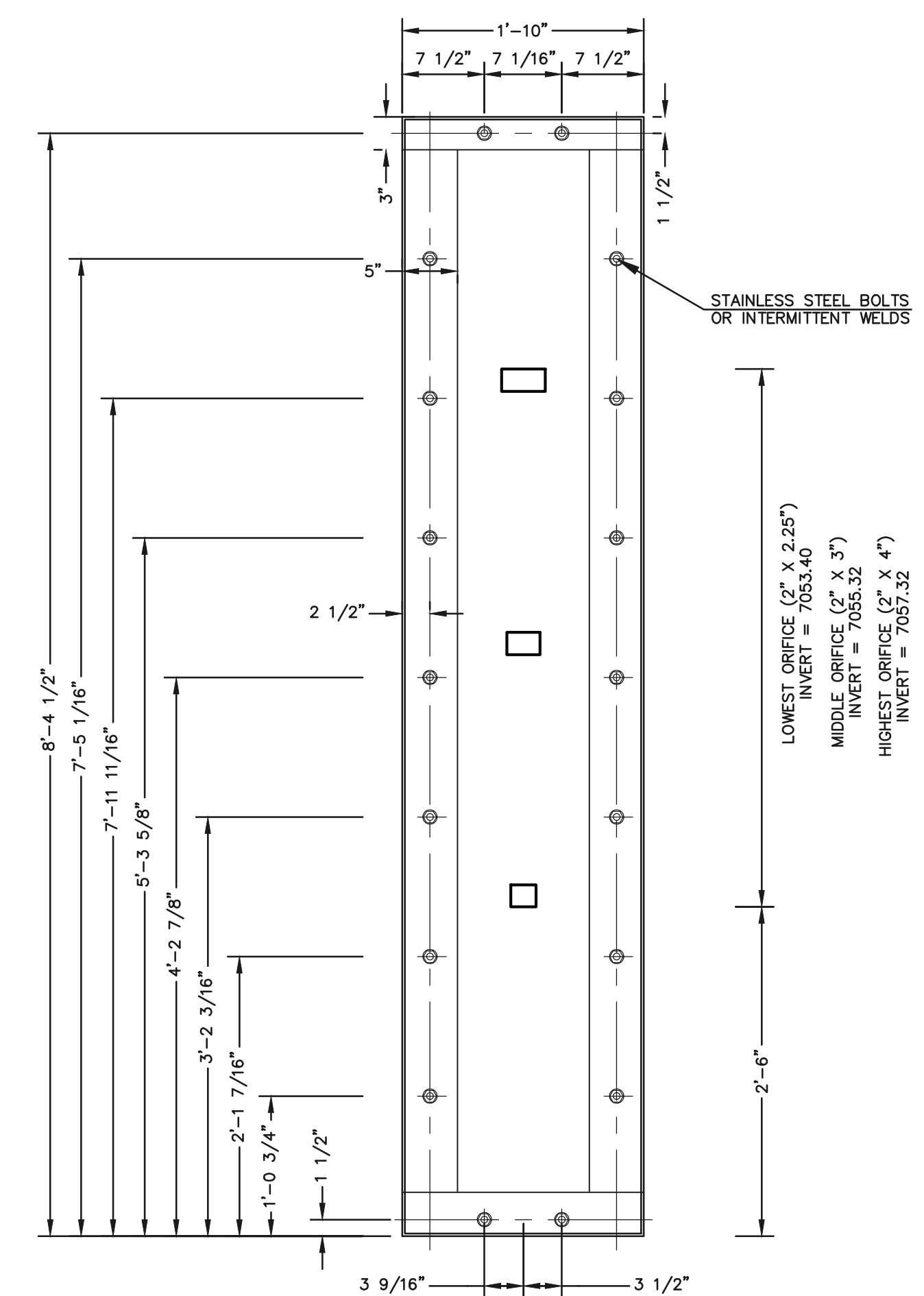




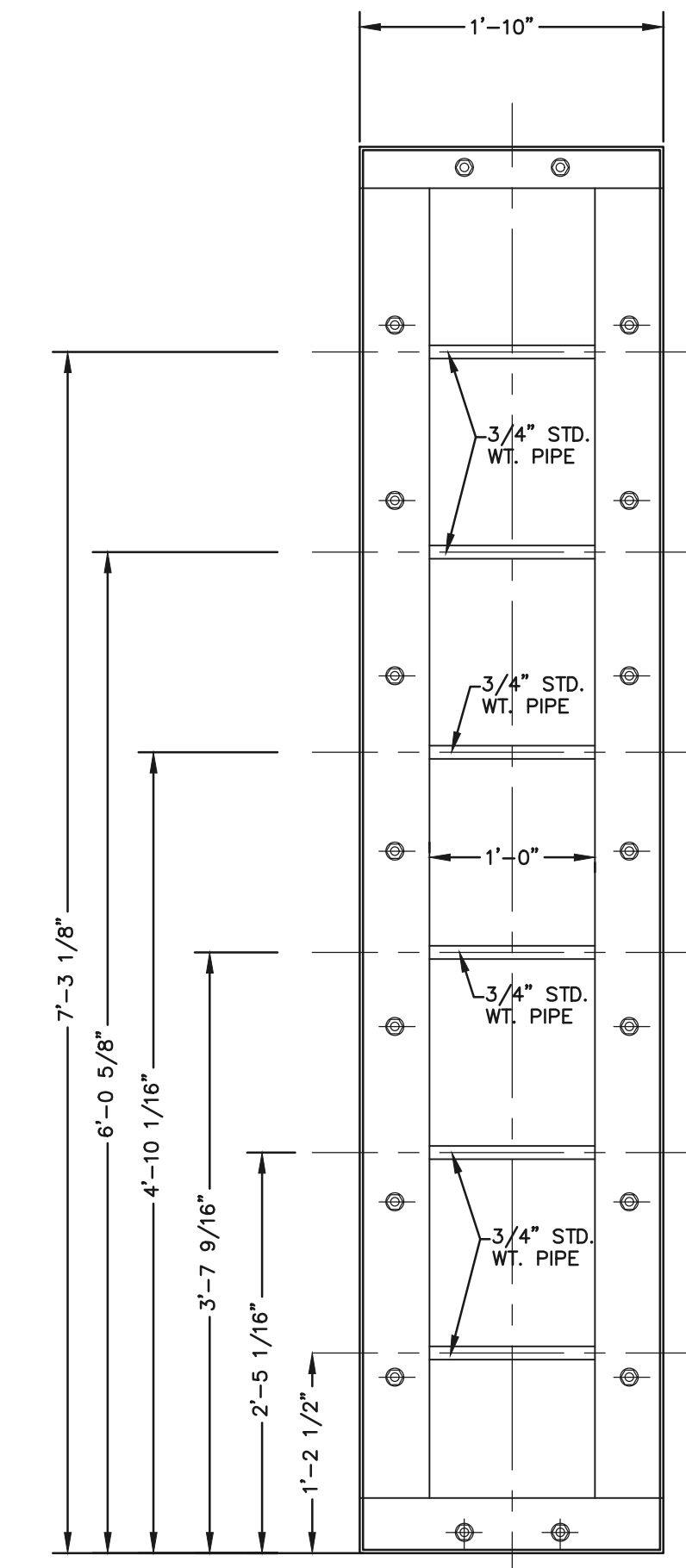
**OUTLET CONTROL PLATE AND FRAME**  
SCALE: 1"=1'



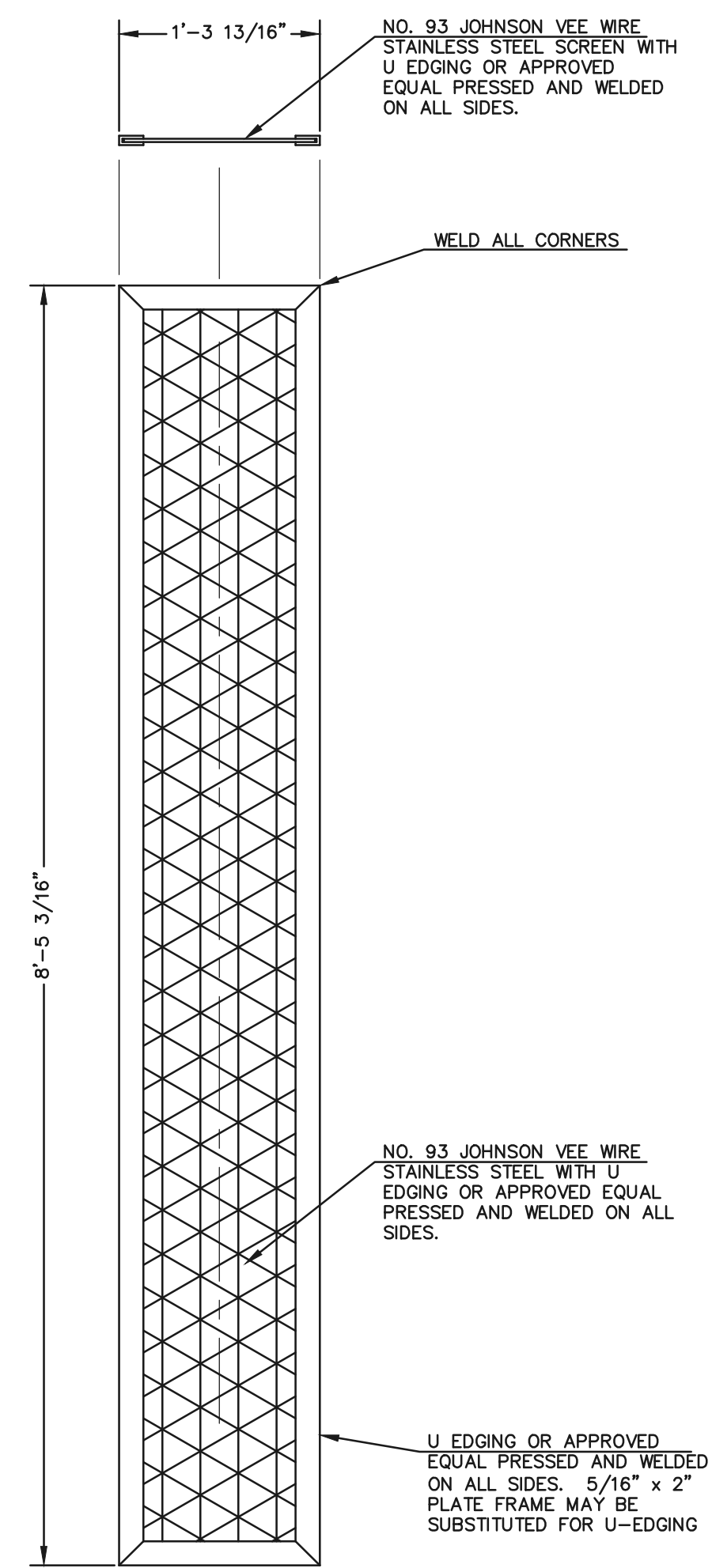
**CHANNEL FRAME WITH WALL ANCHORS**  
SCALE: 1"=1'



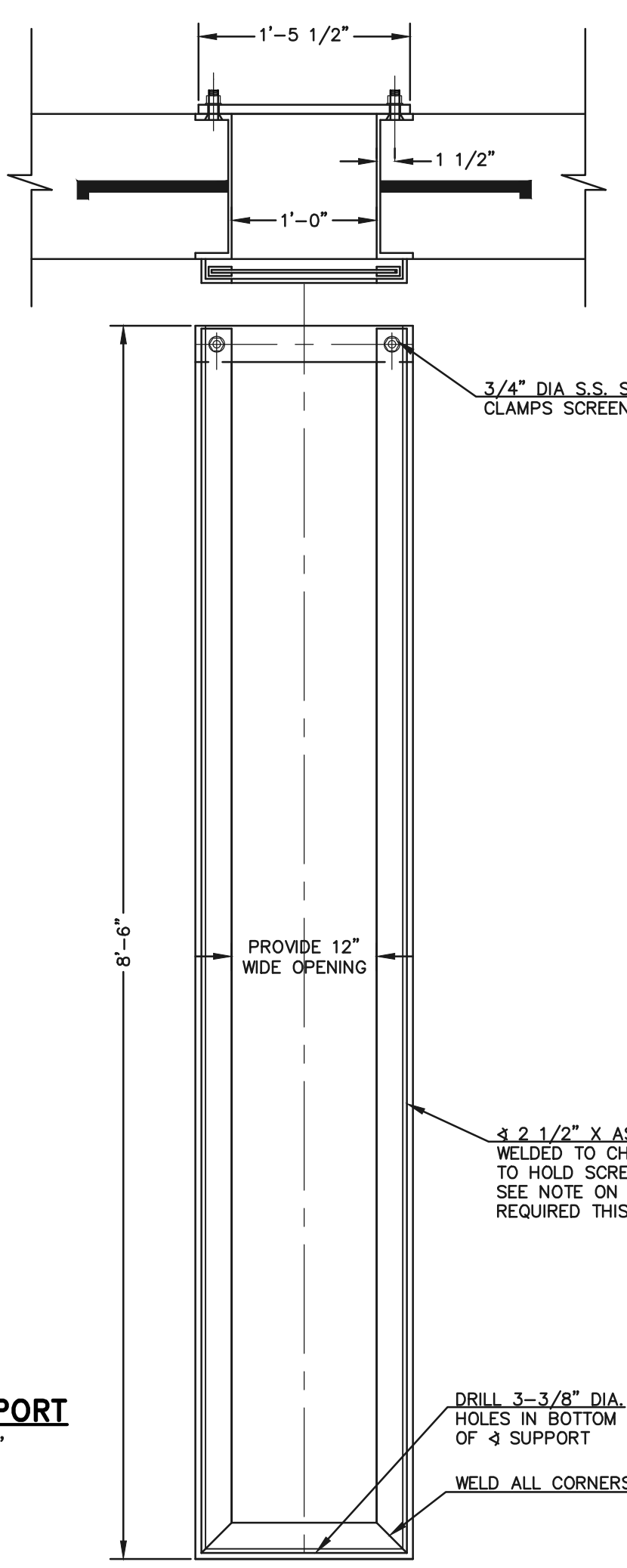
**1/4" THICK ORIFICE PLATE**  
SCALE: 1"=1'



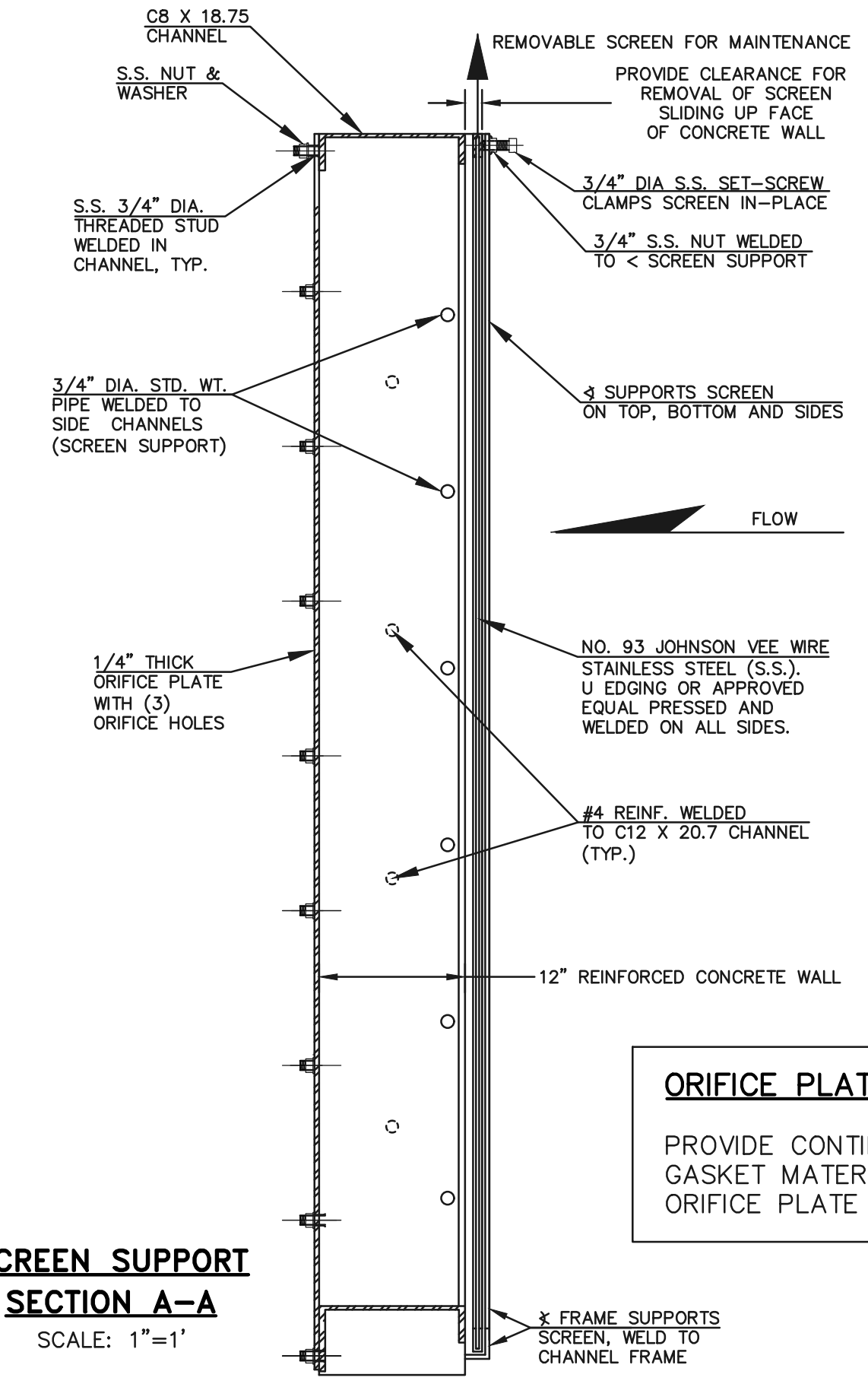
**CHANNEL FRAME**  
SCALE: 1"=1'



**TRASH SCREEN**  
SCALE: 1"=1'



**SCREEN SUPPORT**  
SCALE: 1"=1'



**SCREEN SUPPORT SECTION A-A**  
SCALE: 1"=1'

**ORIFICE PLATE NOTE:**  
PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS		NO. REVISION	DATE
<b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW  THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.			

REVIEW:	DATE
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC	
KYLE R. CAMPBELL, COLORADO P.E. #29794	

618 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903

(719)785-0790  
(719)785-0799(Fax)

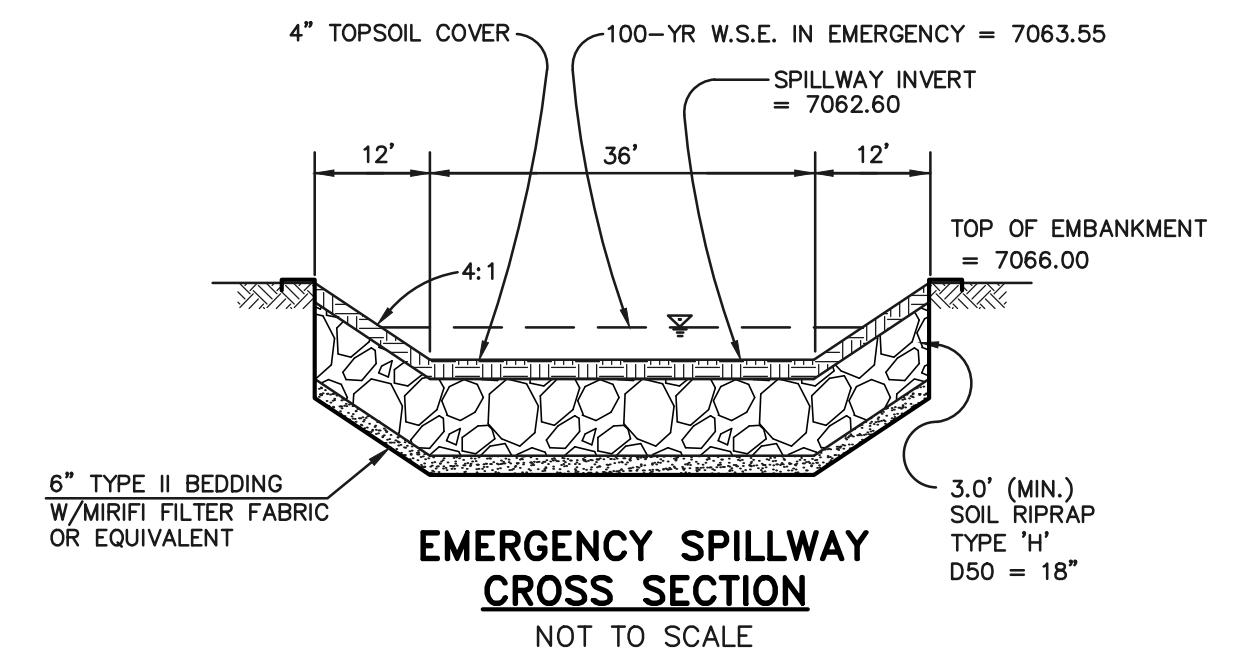
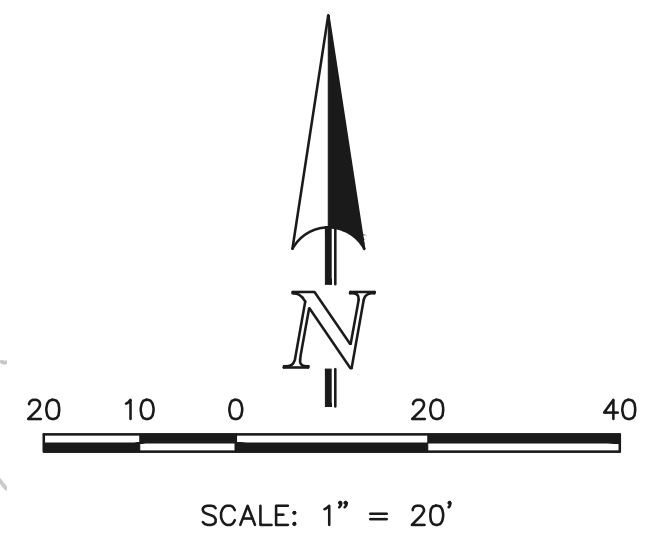
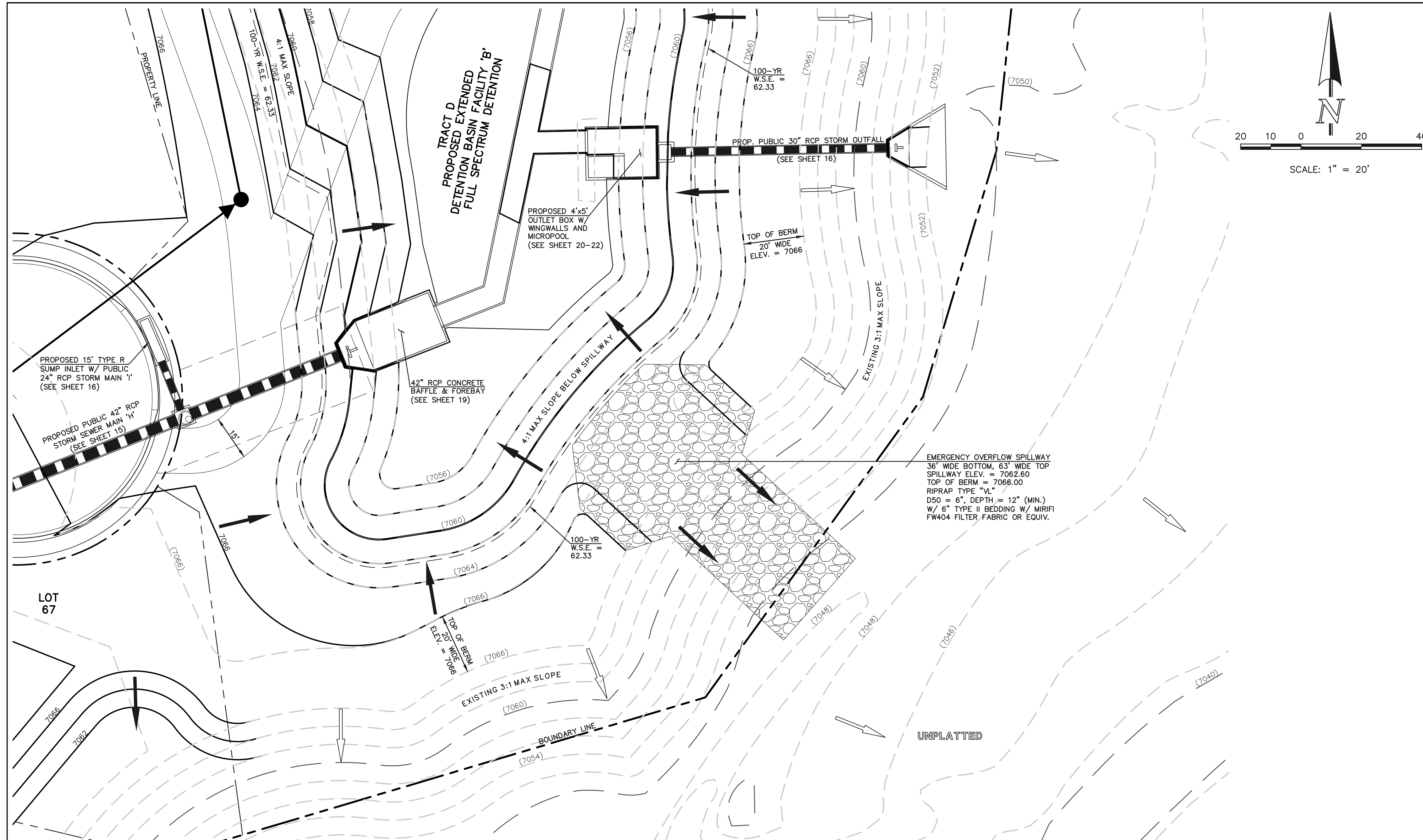
FOREST LAKES FILING NO. 6 CONSTRUCTION PLAN			
OUTLET BOX DETAILS			
DESIGNED BY	MAL	SCALE	DATE 08/04/2020
DRAWN BY	MES	(H) 1"= 1'	SHEET 22 OF 25
CHECKED BY		(V) 1"= N/A	JOB NO. 1175.60

PCD FILE #

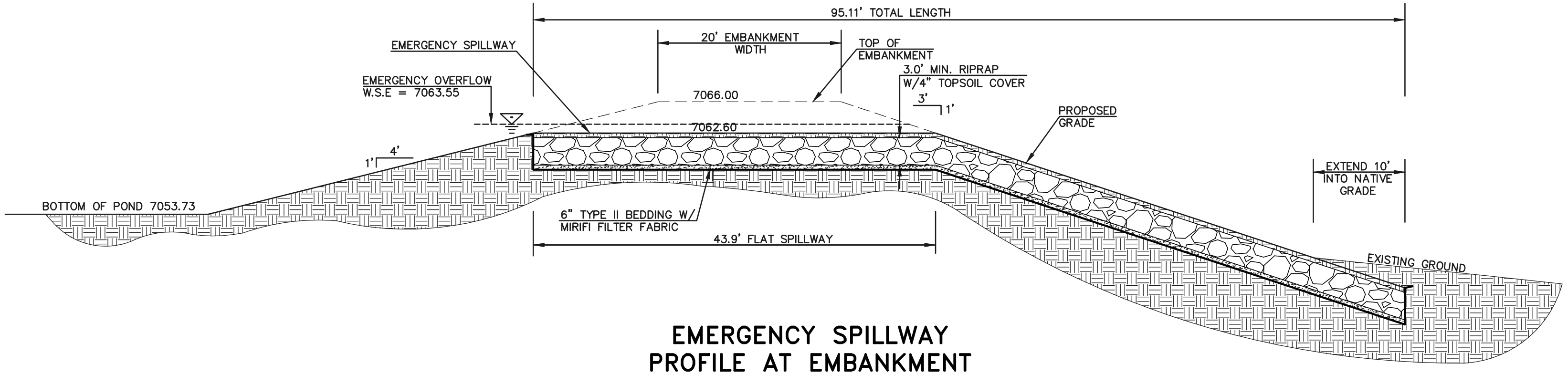


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**EMERGENCY SPILLWAY, EMBANKMENT, AND RUNDOWN PLAN VIEW**  
SCALE: 1" = 20'



**EMERGENCY SPILLWAY PROFILE AT EMBANKMENT SECTION A-A**  
SCALE: 1" = 10'

<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b></p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	NO. REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

PCD FILE #

FOREST LAKES FILING NO. 6  
CONSTRUCTION PLAN

POND SPILLWAY DETAILS

DESIGNED BY	MAL	SCALE	DATE	08/04/2020
DRAWN BY	MES	(H) 1"=VARIES	SHEET	23 OF 25
CHECKED BY	(V) 1"= N/A	JOB NO.	1175.60	

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### CONCRETE HEADWALL INSTALLATIONS

SEE STANDARD PLAN M-601-10 FOR REINFORCING DETAILS.

**GENERAL NOTES**

- FOR SIZE AND LOCATION OF PIPES, SEE THE PLANS.
- ALL CONCRETE SHALL BE CLASS B.
- FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED IN ACCORDANCE WITH SUBSECTION BOLDING.
- CORNERED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- HEADWALL SHALL HAVE REINFORCING STEEL INSTALLED IN A PATTERN SIMILAR TO STANDARD PLAN M-601-10.
- THE COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE WORK UNLESS THE STEEL QUANTITIES ARE LISTED IN THE PLANS AND ARE PAID FOR SEPARATELY.

**PIPE OUTLET PAVING**  
MAY BE USED WITH MULTIPLE PIPES.

**CONCRETE HEADWALL INSTALLATIONS**

PIPE	PIPE DIAMETER (AND EQUIVALENT DIAMETERS ONLY)												
	18		24		30		36		42		48		
TYPE	MATERIAL	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE
CIRCULAR	RIGID	1.0	1.3	1.5	2.0	2.0	2.7	2.8	3.6	3.6	4.6	4.6	6.0
	FLEXIBLE	1.1	1.4	1.6	2.1	2.2	3.0	3.0	4.0	3.8	5.3	5.0	6.8
ELLIPTICAL	RIGID	0.9	1.2	1.3	1.6	1.7	2.2	2.3	2.9	2.9	3.7	3.5	4.4
	METAL	2.2	1.3	2.9	1.8	3.6	2.2	4.3	2.7	5.0	3.1	5.8	3.6
ARCH	RIGID	0.9	1.3	1.4	1.9	1.8	2.4	2.4	3.4	3.2	4.4	3.4	5.0
	METAL	2.2	1.3	2.9	1.8	3.6	2.2	4.3	2.7	5.0	3.1	5.8	3.6

**CONCRETE QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)**

THICKNESS	MATERIAL	PIPE DIAMETER (IN.)					
		18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2	1.6	2.0	2.4
6"	CONCRETE	0.6	1.2	1.8	2.4	3.0	3.6
18"	REBAR	2.0	3.5	5.4	7.8	10.7	13.9

**PIPE OUTLET PAVING (CUBIC YARDS)**  
NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

THICKNESS	MATERIAL	PIPE DIAMETER (IN.)					
		18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2	1.6	2.0	2.4
6"	CONCRETE	0.6	1.2	1.8	2.4	3.0	3.6
18"	REBAR	2.0	3.5	5.4	7.8	10.7	13.9

**Computer File Information**

Creation Date: 07/04/12	Integrator: DD	Sheet Revisions	Colorado Department of Transportation
Latest Modification Date: 07/04/12	Integrator: LTA	Project Development Branch	DD/LTA
File Path: www.cdot.state.co.us/infrastructure/infrastructure	Integrator: LTA	Project Development Branch	DD/LTA
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CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English	Integrator: LTA

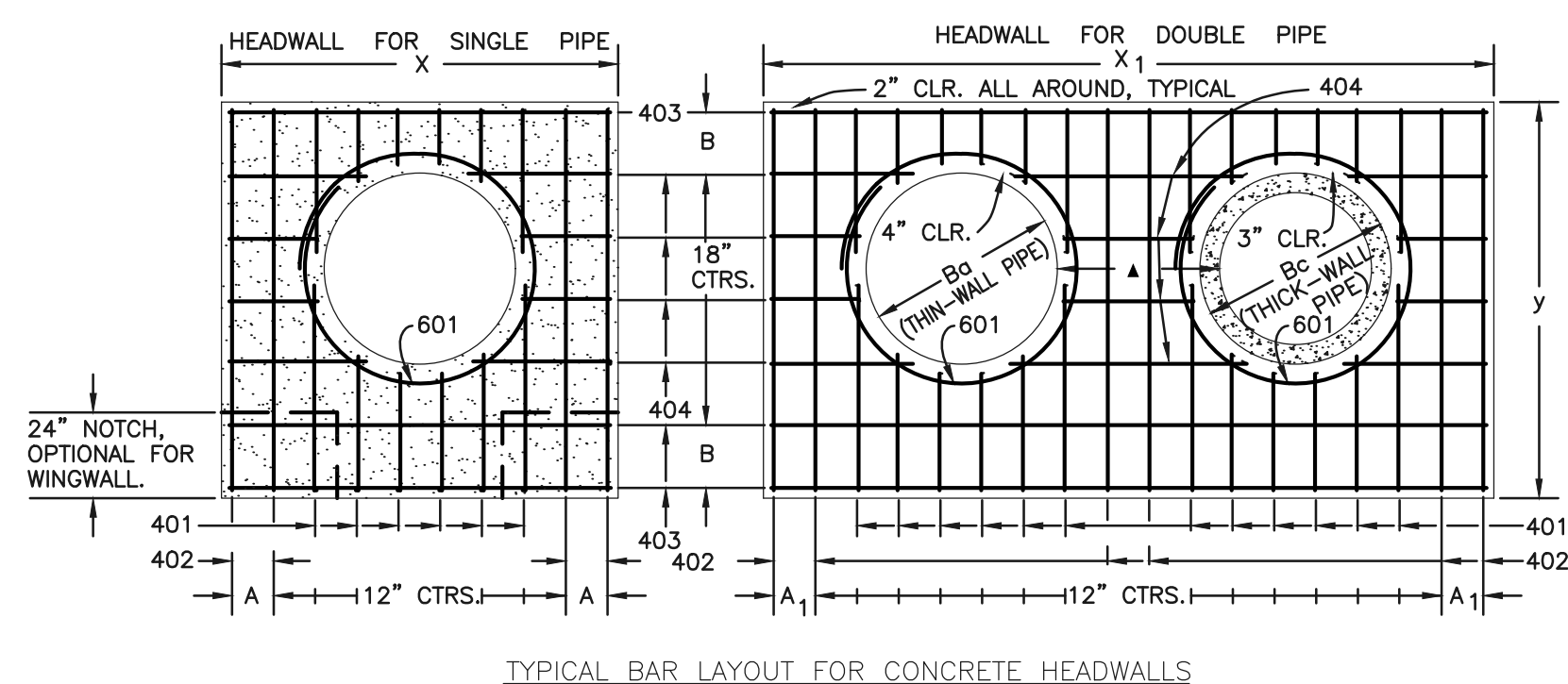
**HEADWALLS AND PIPE OUTLET PAVING**  
STANDARD PLAN NO. M-601-12  
Sheet No. 1 of 1

### CDOT M-601-12 HEADWALL DETAIL

**GENERAL NOTES**

- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- WINGWALL FOOTINGS AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
- DIMENSIONS "A", "B", "R", "T", "X", "Y", "Z" AND ANGLES FOR WINGWALLS SHALL BE AS SHOWN ON THE PLANS.
- REINFORCING STEEL SHALL BE GRADE 60.
- THE MINIMUM SPLICE LENGTH FOR COMMON BAR SIZES SHALL BE:

BAR	#4	#5	#6
SPLICE LENGTH	1'-3"	1'-7"	2'-0"



**HEADWALL FOR THICK-WALL ROUND PIPE**

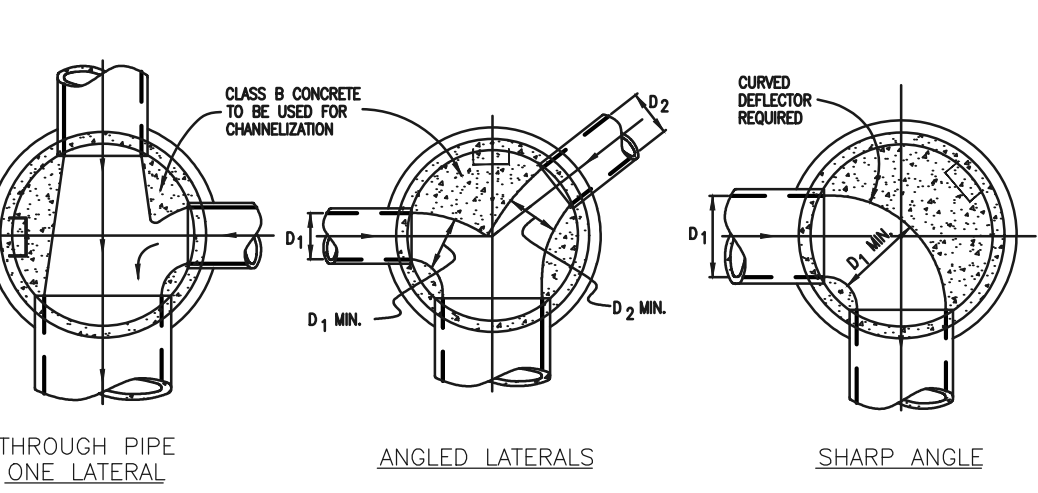
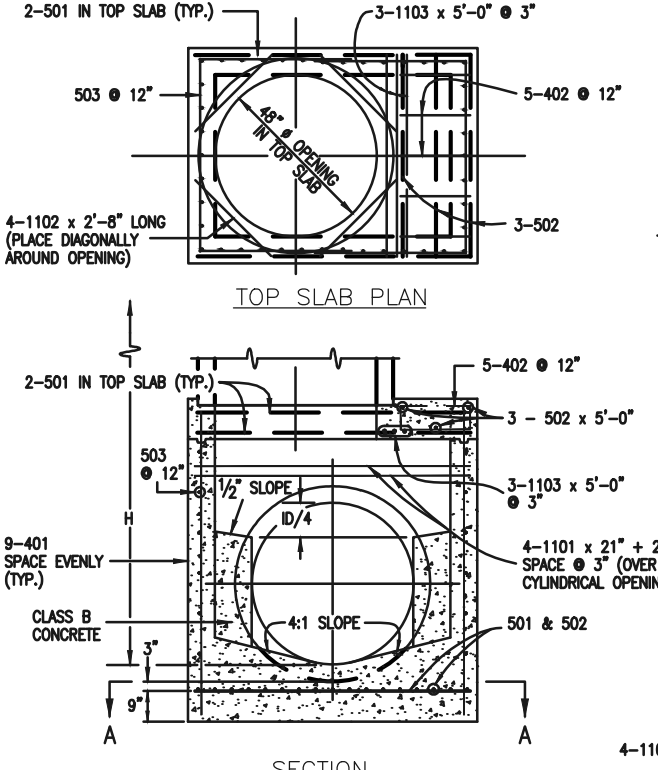
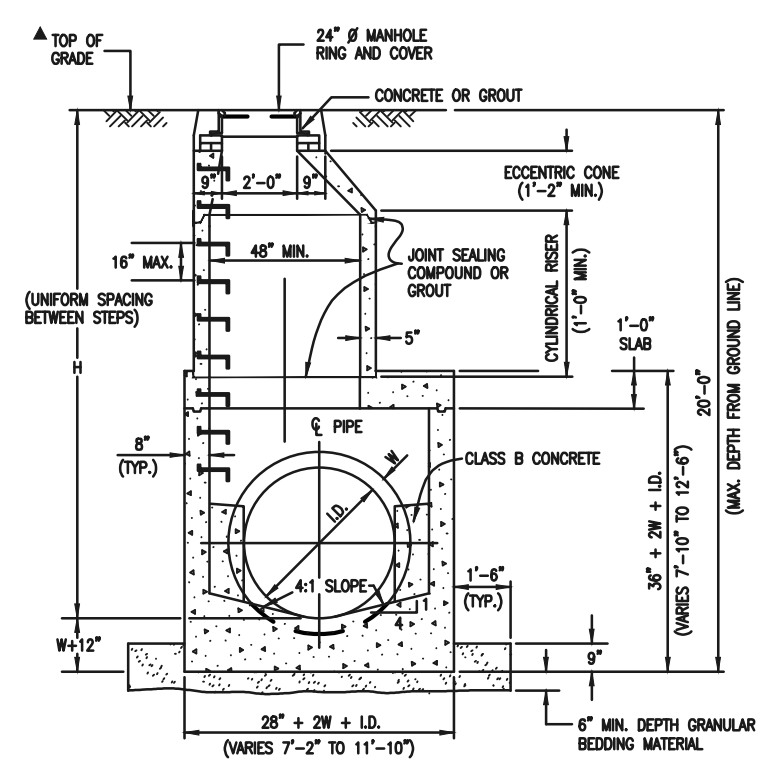
DIMENSIONS

Ba	Bc	X	A	X1	A1	y	B	X2
54	65	8-9	8 1/2	15-6	7	9-2	17	20
60	72	9-6	7	17-0	10	9-8	11	21
66	79	10-3	11 1/2	18-6	7	10-2	14	22
72	86	11-0	10	20-0	10	10-8	17	23
78	93	11-9	8 1/2	21-3	11	11-2	11	24
84	100	12-6	7	22-6	7	11-8	14	25
90	107	13-3	11 1/2	23-9	8 1/2	12-2	17	26
96	114	14-0	10	25-0	10	12-8	11	27
102	121	14-9	8 1/2	26-3	11 1/2	13-2	14	28
108	128	15-6	7	27-6	7	13-8	17	29

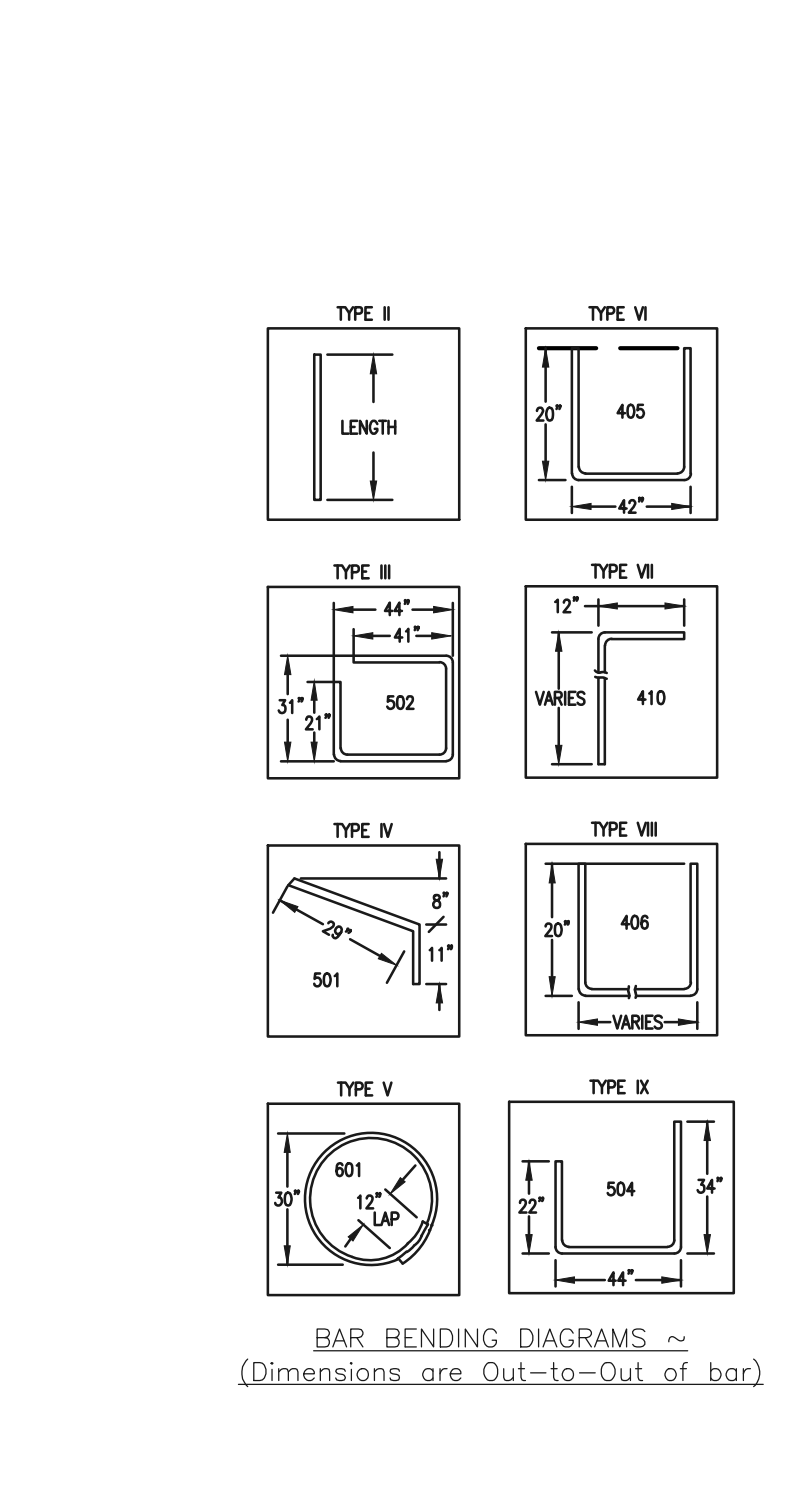
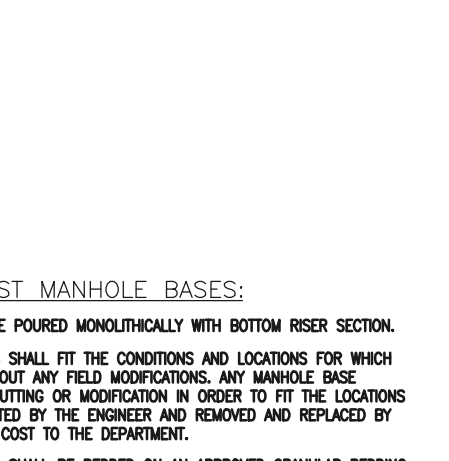
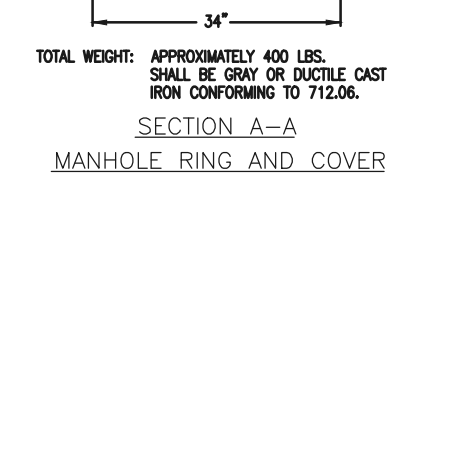
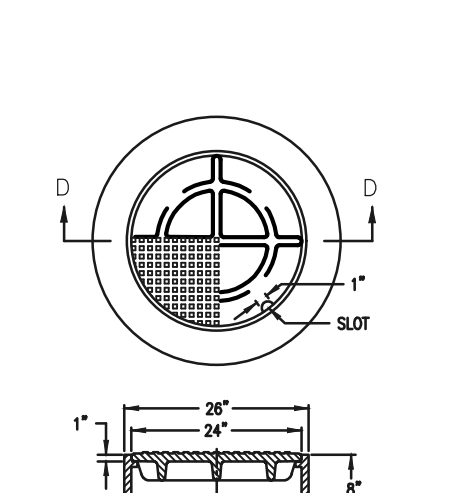
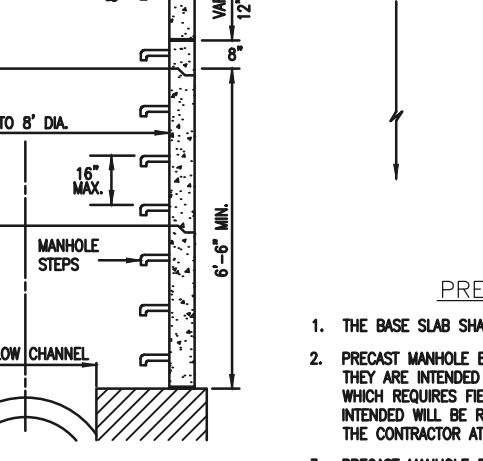
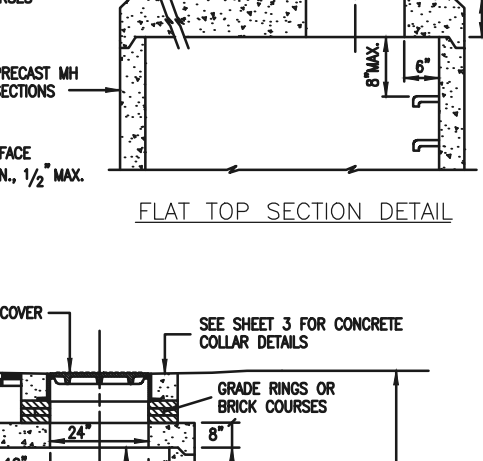
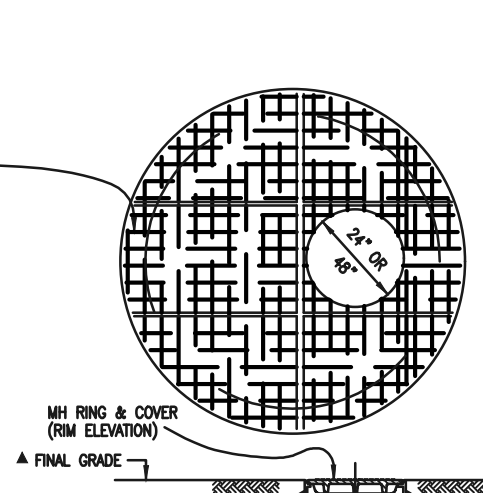
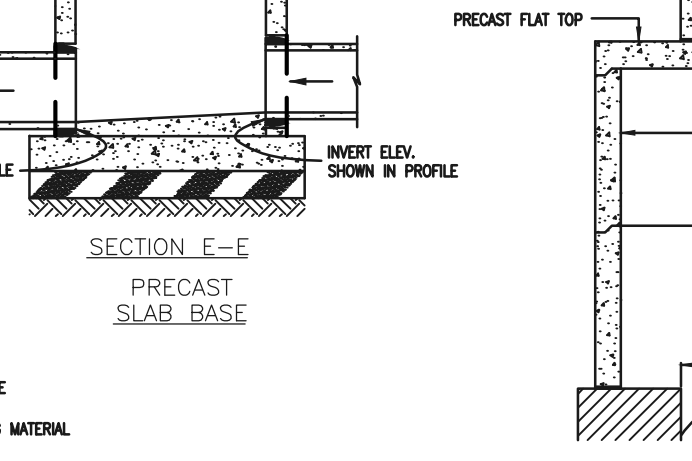
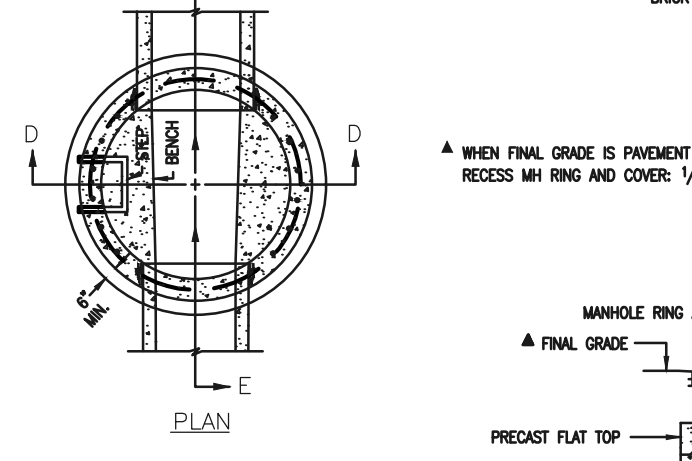
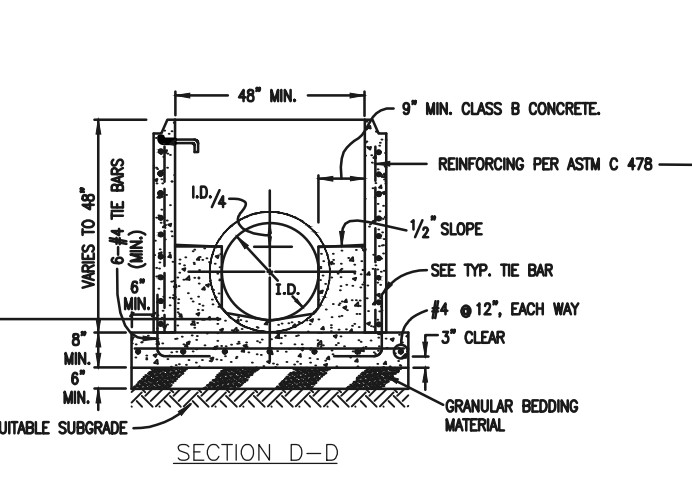
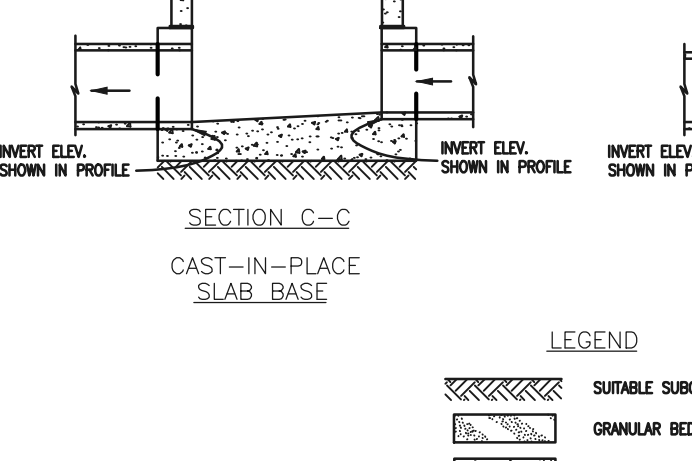
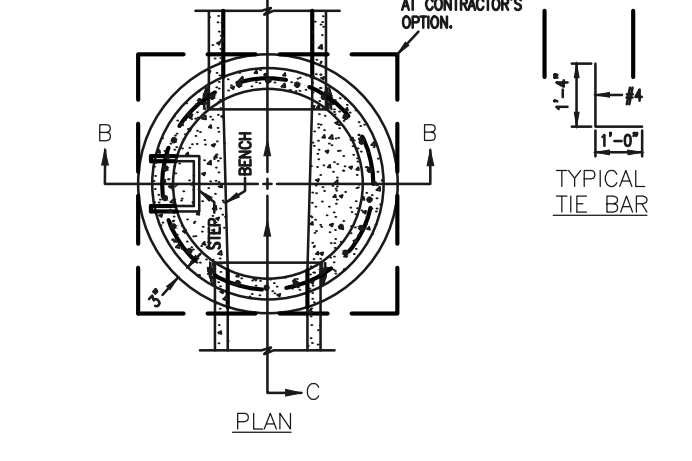
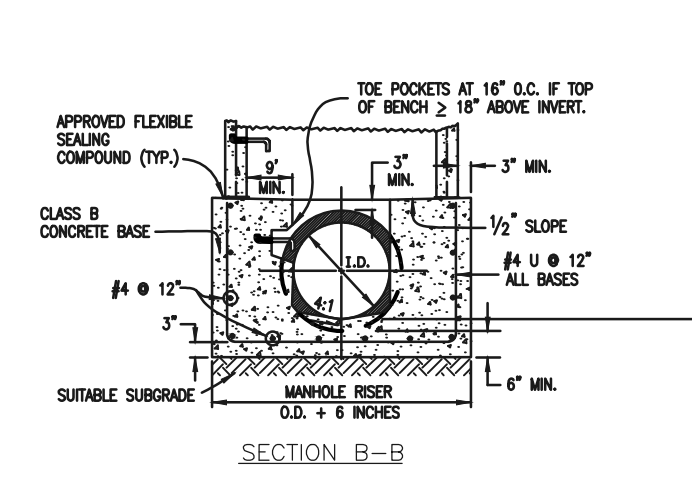
QUANTITIES

CONCRETE	STEEL
SGL	DBL
CU/YD	DBL
1.22	1.55
1.35	1.70
1.48	1.85
1.61	2.00
1.74	2.15
1.87	2.30
2.00	2.45
2.13	2.60
2.26	2.75
2.39	2.90
2.52	3.05
2.65	3.20
2.78	3.35
2.91	3.50
3.04	3.65
3.17	3.80
3.30	3.95
3.43	4.10
3.56	4.25
3.69	4.40
3.82	4.55
3.95	4.70
4.08	4.85
4.21	5.00
4.34	5.15
4.47	5.30
4.60	5.45
4.73	5.60
4.86	5.75
4.99	5.90
5.12	6.05
5.25	6.20
5.38	6.35
5.51	6.50
5.64	6.65
5.77	6.80
5.90	6.95
6.03	7.10
6.16	7.25
6.29	7.40
6.42	7.55
6.55	7.70
6.68	7.85
6.81	8.00
6.94	8.15
7.07	8.30
7.20	8.45
7.33	8.60
7.46	8.75
7.59	8.90
7.72	9.05
7.85	9.20
7.98	9.35
8.11	9.50
8.24	9.65
8.37	9.80
8.50	9.95
8.63	10.10
8.76	10.25
8.89	10.40
9.02	10.55
9.15	10.70
9.28	10.85
9.41	11.00
9.54	11.15
9.67	11.30
9.80	11.45
9.93	11.60
10.06	11.75
10.19	11.90
10.32	12.05
10.45	12.20
10.58	12.35
10.71	12.50
10.84	12.65
10.97	12.80
11.10	12.95
11.23	13.10
11.36	13.25
11.49	13.40
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11.75	13.70
11.88	13.85
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12.14	14.15
12.27	14.30
12.40	14.45
12.53	14.60
12.66	14.75
12.79	14.90
12.92	15.05
13.05	15.20
13.18	15.35
13.31	15.50
13.44	15.65
13.57	15.80
13.70	15.95
13.83	16.10
13.96	16.25
14.09	16.40
14.22	16.55
14.35	16.70
14.48	16.85
14.61	17.00
14.74	17.15
14.87	17.30
15.00	17.45
15.13	17.60
15.26	17.75
15.39	17.90
15.52	18.05
15.65	18.20
15.78	18.35
15.91	18.50
16.04	18.65
16.17	18.80
16.30	18.95
16.43	19.10
16.56	19.25
16.69	19.40
16.82	19.55
16.95	19.70
17.08	19.85
17.21	20.00
17.34	20.15
17.47	20.30
17.60	20.45
17.73	20.60
17.86	20.75
17.99	20.90
18.12	21.05
18.25	21.20
18.38	21.35
18.51	21.50
18.64	21.65
18.77	21.80
18.90	21.95
19.03	22.10
19.16	22.25
19.29	22.40
19.42	22.55
19.55	22.70
19.68	22.85
19.81	23.00
19.94	23.15
20.07	23.30
20.20	23.45
20.33	23.60
20.46	23.75
20.59	23.90
20.72	24.05
20.85	24.20
20.98	24.35
21.11	24.50
21.24	24.65
21.37	24.80
21.50	24.95
21.63	25.10
21.76	25.25
21.89	25.40
22.02	25.55
22.15	25.70
22.28	25.85
22.41	26.00
22.54	26.15
22.67	26.30
22.80	26.45
22.93	26.60
23.06	26.75
23.19	26.90
23.32	27.05
23.45	27.20
23.58	27.35
23.71	27.50
23.84	27.65
23.97	27.80
24.10	27.95
24.23	28.10
24.36	28.25
24.49	28.40
24.62	28.55
24.75	28.70
24.88	28.85
25.01	29.00
25.14	29.15
25.27	29.30
25.40	29.45
25.53	29.60
25.66	29.75
25.79	29.90
25.92	30.05
26.05	30.20
26.18	30.35
26.31	30.50
26.44	30.65
26.57	30.80
26.70	30.95
26.83	31.10
26.96	31.25
27.09	31.40
27.22	31.55
27.35	31.70
27.48	31.85
27.61	32.00
27.74	32.15
27.87	32.30
28.00	32.45
28.13	32.60
28.26	32.75
28.39	32.90
28.52	33.05
28.65	33.20
28.78	33.35
28.91	33.50
29.04	33.65
29.17	33.80
29.30	33.95
29.43	34.10
29.56	34.25
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30.21	35.00
30.34	35.15
30.47	35.30
30.60	35.45
30.73	35.60
30.86	35.75
30.99	35.90
31.12	36.05
31.25	36.20
31.38	36.35
31.51	36.50
31.64	36.65
31.77	36.80
31.90	36.95
32.03	37.10
32.16	37.25
32.29	37.40
32.42	37.55
32.55	37.70
32.68	37.85
32.81	38.00
32.94	38.15
33.07	38.30
33.20	38.45
33.33	38.60
33.46	38.75
33.59	38.90
33.72	39.05
33.85	39.20
33.98	39.35
34.11	39.50
34.24	39.65
34.37	39.80
34.50	39.95
34.63	40.10
34.76	40.25
34.89	40.40
35.02	40.55
35.15	40.70
35.28	40.85
35.41	41.00
35.54	41.15
35.67	41.30
35.80	41.45
35.93	41.60
36.06	41.75
36.19	41.90
36.32	42.05
36.45	42.20
36.58	42.35
36.71	42.50
36.84	42.65
36.97	42.80
37.10	42.95
37.23	43.10
37.36	43.25
37.49	43.40
37.62	43.55
37.75	43.70
37.88	43.85
38.01	44.00
38.14	44.15
38.27	44.30
38.40	44.45
38.53	44.60
38.66	44.75
38.79	44.90
38.92	45.05
39.05	45.2





- GENERAL NOTES**
1. SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
  2. THE PRECAST FLAT TOP MAY BE USED ON ANY MANHOLE. THE ECCENTRIC CONE MAY BE USED WHEN THE MANHOLE "H" HEIGHT IS AT LEAST 8 FT.
  3. THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A CEMENT GROUT IN UNPAVED AREA OR A CONCRETE COLLAR IN PAVED AREA. SEE DETAILS ON SHEETS 2 AND 3.
  4. DESIGN OF BOX BASE IS BASED ON STRAIGHT RUNS OF CONDUIT OR CHANGE IN DIRECTION OF LESS THAN 45°. SPECIAL DESIGN IS REQUIRED FOR 45° OR GREATER.
  5. PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (ASTM M 199).
  6. CAST-IN-PLACE MANHOLES SHALL BE CLASS B CONCRETE.
  7. STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3 FT. - 8 IN. AND SHALL BE IN ACCORDANCE WITH ASTM M 199.
  8. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT 1/4 OF WALL. ALL BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.
  9. ALL PIPE ENTRIES INTO THE BASE OF MANHOLE SHALL BE CONNECTED BY OPEN CHANNELIZATION ADAPTED FOR PIPE SIZE, SLOPE, AND DIRECTION OF FLOW. DETAILS SHOWN ARE TYPICAL FOR INSTALLATIONS WITH ALL INVERTS OF SAME RELATIVE ELEVATION. FOR DIFFERENTIAL ELEVATIONS BETWEEN INVERTS, SPECIAL BASE/CHANNEL DETAILS WILL BE SHOWN ON THE PLANS.
  10. PIPE CHANNELS AND SHEETS SHALL BE FORMED BY SHUDDING WITH CLASS B CONCRETE OR APPROVED GROUT.
  11. STUB-OUTS SHALL EXTEND 2 FT. MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
  12. CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL SANITARY SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.
  13. THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.



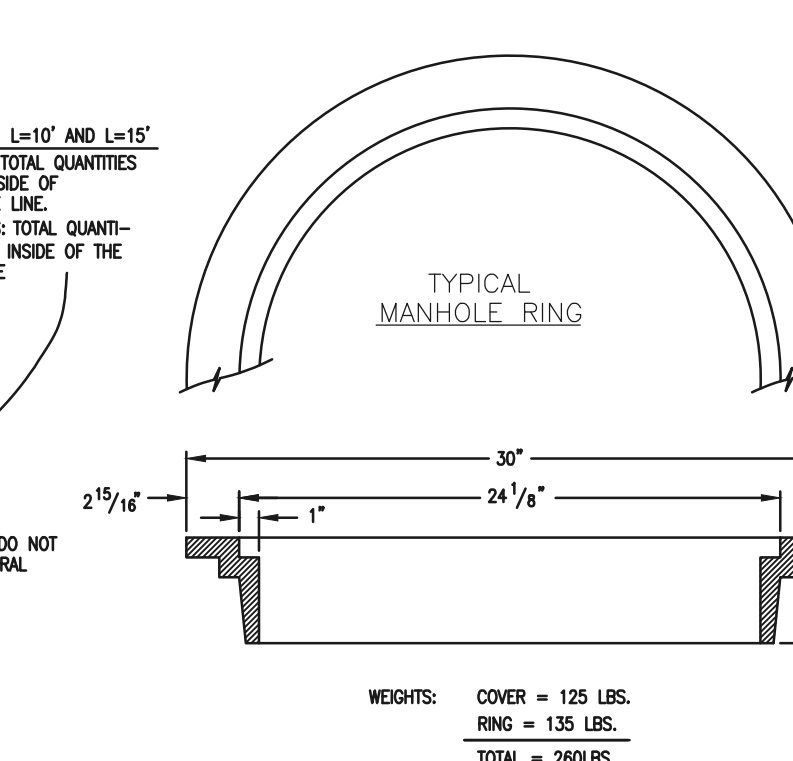
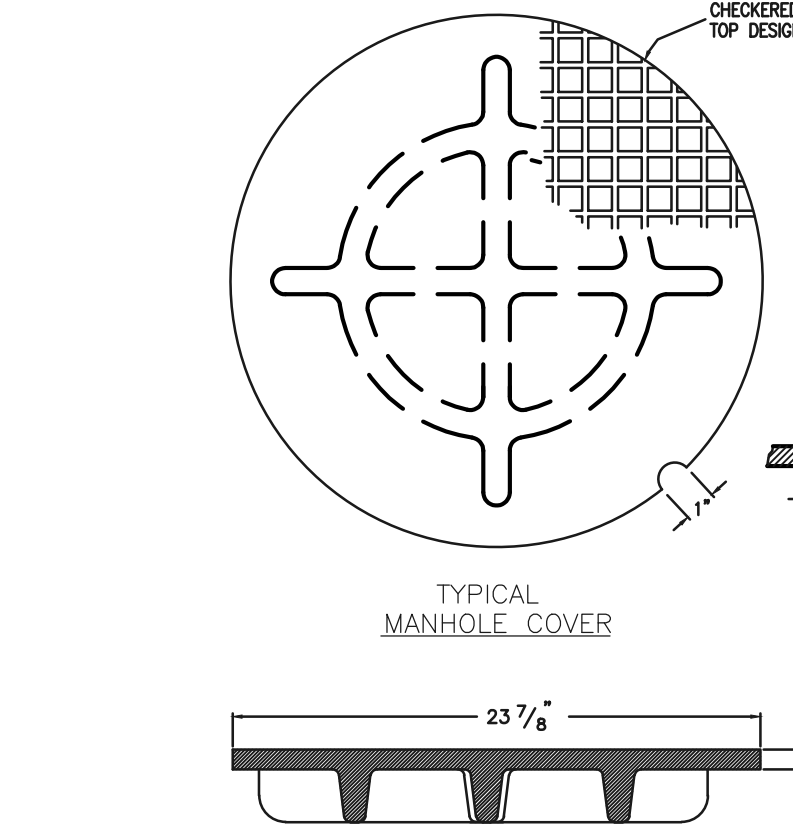
**QUANTITIES FOR CONCRETE MANHOLE BOX BASE**

MARK	SIZE	TYPE	WT. #/YD.	NO. BARS	54"	60"	66"	72"	84"	96"	FORMULAS
401	4	I	0.668	18	18	18	18	18	18	18	401 BAR LENGTH = 32" + 2W.I.D.
402	4	II	0.668	5	5	5	5	5	5	5	402 BAR LENGTH = I.D. + 2W
501	5	I	1.043	17	17	17	17	17	17	17	501 BAR LENGTH = 24" + I.D. + 2W
502	5	II	1.043	12	12	12	12	12	12	12	502 NUMBER BARS REQ'D. = 3 + (24 + I.D. + 2W) / 1
503	5	III	1.043	12	12	12	12	12	12	12	503 NUMBER BARS REQ'D. = 2 + (24 + I.D. + 2W) / 1
504	5	IV	1.043	12	12	12	12	12	12	12	504 NUMBER BARS REQ'D. = 2 + (24 + I.D. + 2W) / 1
1101	11	I	5.313	4	4	4	4	4	4	4	1101 BAR LENGTH = 21" + I.D. + 2W
1102	11	II	5.313	4	4	4	4	4	4	4	1102 BAR LENGTH = 21" + I.D. + 2W
1103	11	III	5.313	4	4	4	4	4	4	4	1103 BAR LENGTH = 21" + I.D. + 2W

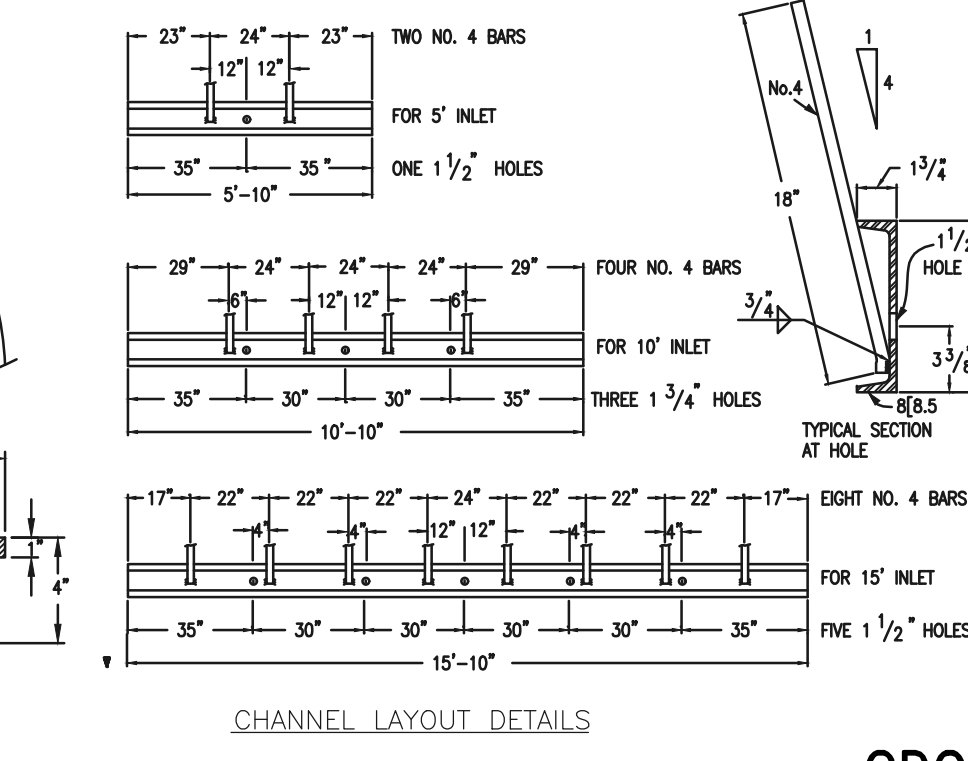
**CDOT MANHOLES  
STD. PLAN NO: M-604-20**

**TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"**

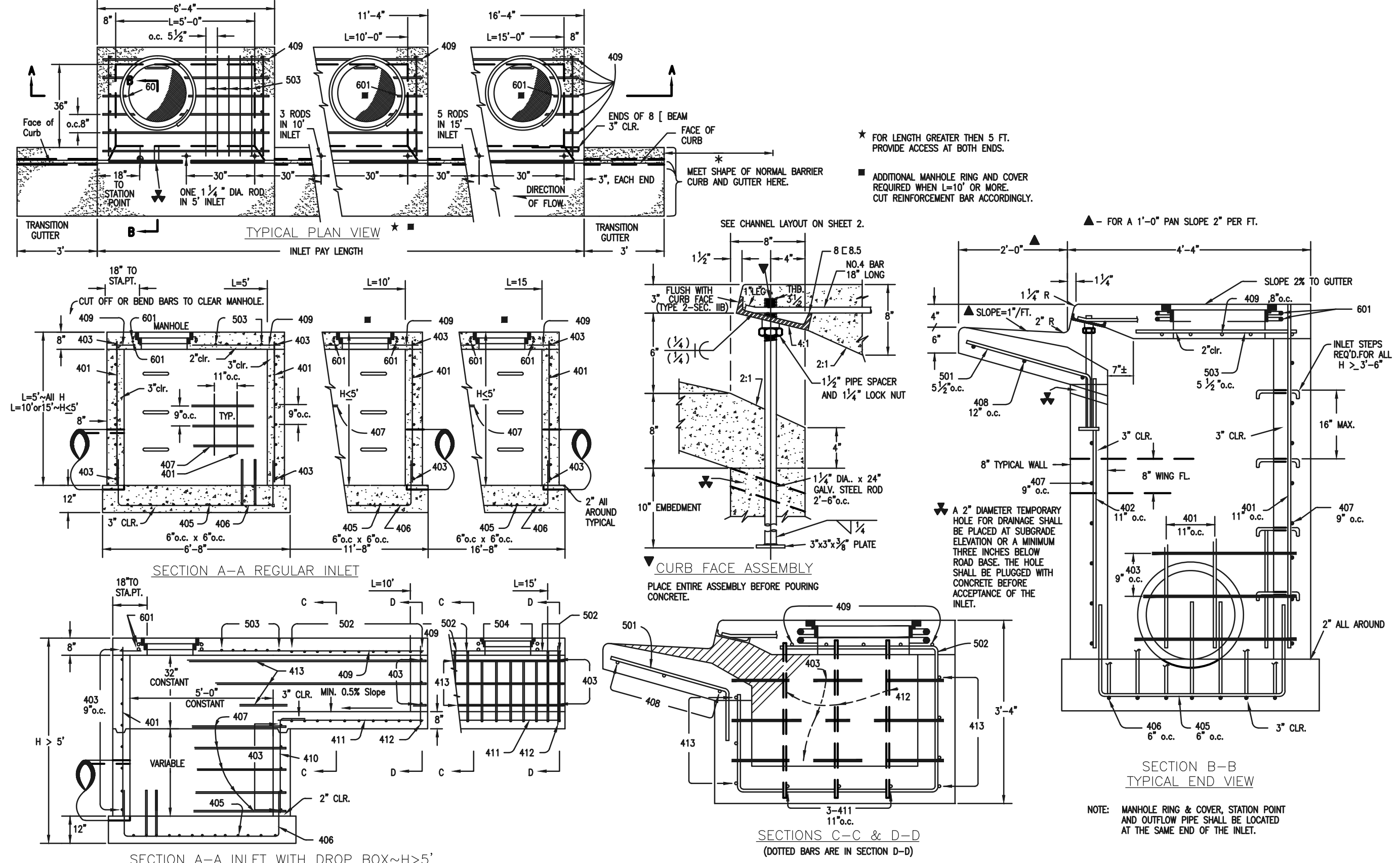
MARK	DIA. IN.	O.C. SPACING	TYPE	ALL INLETS							
				L = 5'		L = 10'		L = 15'			
				NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
401	11"	II	15	21	26	11	11				
402	11"	II	7	13	18	7	7				
403	9"	II	4	10	14	4	4				
405	6"	VI	11	6	10	11	11	6	10	11	11
406	6"	VIII	7	8	10	7	7	8	10	7	7
407	9"	II	5	10	14	5	5	10	14	5	5
408	12"	II	3	6	10	3	3	6	10	3	3
409	8"	II	6	5	10	6	6	5	10	6	6
410	11"	VII									
411	11"	II									
412	11"	II									
413	9"	II									
501	5 1/2"	IV	11	3	4	22	3	4	33	3	4
502	5 1/2"	III									
503	5 1/2"	II	5	3	6	16	3	6	27	3	6
504	5 1/2"	IX									
601	2 1/2"	V	2	8	10	2	8	10	2	8	10



- GENERAL NOTES**
1. ALL CONCRETE SHALL BE CLASS B.
  2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 IN. THICK.
  3. INLET STEPS SHALL BE IN ACCORDANCE WITH ASTM M 199.
  4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
  5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" IN. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
  6. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE EPOXY COATED.
  7. DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
  8. MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO 712.06.
  9. SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
  10. STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF 712.06.



**CDOT TYPE R INLET  
STD. PLAN NO: M-604-12**



48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS	NO. REVISION	DATE	REVIEW:
811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW			PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.			KYLE R. CAMPBELL, COLORADO P.E. #29794

DESIGNED BY	SCALE	DATE
MAL	(H) 1" = N/A	08/04/2020
DRAWN BY	SHEET	OF
MES	25	25
CHECKED BY	JOB NO.	
	1175.60	



DESIGNED BY	SCALE	DATE
MAL	(H) 1" = N/A	08/04/2020
DRAWN BY	SHEET	OF
MES	25	25
CHECKED BY	JOB NO.	
	1175.60	





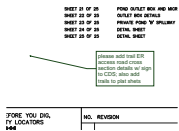
# CD V\_1 redlines V\_1.pdf Markup Summary 11-25-2020

dsdparsons (5)



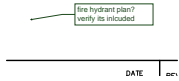
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in CDS provide the sign detail for the trail and ER road limiting access to forest please.



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please add trail ER access road cross section details w/ sign to CDS; also add trails to plat shets



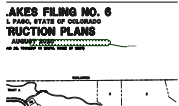
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fire hydrant plan? verify its included



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OF



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DATE?