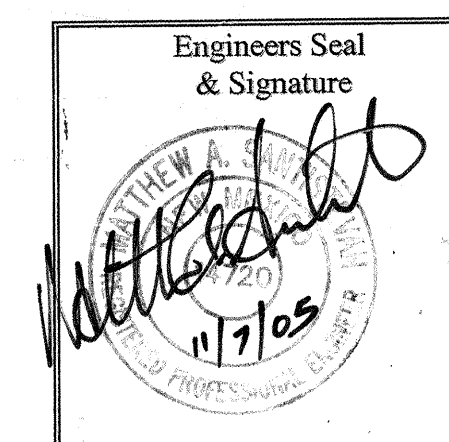


SCANNED BY
MESA REPRO

SECRET

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

APPROVAL OF RECORD DRAWINGS
CHIEF CONSTRUCTION ENGINEER
PROJECT MANAGER
Moby Mirza
DATE 1-4-06
Moby Mirza



THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- ☒ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- ☒ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- ☒ TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE ENGINEER.
- ☐ SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS REQUIRED.
- ☐ IF CURB IS DEPRESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
- ☒ ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
- ☒ THE REQUESTOR OR DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ALL CURB AND GUTTER OR SIDEWALK DAMAGED AFTER APPROVAL BY THE CITY ENGINEER OF WORK COMPLETED BY THE CONTRACTOR.

25100

Gene Aung

LEONORE R. ARNALDO
NEW MEXICO
15511
WED PROFESSIONAL SUPERIOR

10-26-06

304-33									
30-32			6-16-04						
29-33			3-16-04	Michael Paul	3-16-04	William G. Baskin	3-16-04		
REV. SHEETS	CITY ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE	
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER		DATE	*****			
		DRC Chairman	[Signature]		3-9-04	APPROVED FOR CONSTRUCTION Date 3-02-04			
		Transportation	[Signature]		03/04/04				
		Water/Wastewater	[Signature]		02/11/04				
		Hydrology	[Signature]		3/04/04				
		CIP	[Signature]						
		Const. Mgmt.							
		Const. Coord.	[Signature]		3-9-04				
DRB Case Number	City Project No.		701192		Sheet		Of 33		

* SHEETS 30, 31 AND 32 REPLACED WITH SHEETS 30A, 31A AND 32A. 2

RECORD DRAWING

GENERAL NOTES

1. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
3. DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE CONSTRUCTION OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
5. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY COSTS INCURRED FOR REPAIRS SHALL BE THE COST OF THE CONTRACTOR.
6. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
7. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (i.e. BARRICADING, SURFACE DISTURBANCE).
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE AT HIS EXPENSE ANY AND ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
9. ALL CURVE DATA AND DIMENSIONS FOR ROADWAY CONSTRUCTION REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
10. THE CONSTRUCTION TRAFFIC CONTROL PLAN FOR COA PROJECT 701291 WILL BE USED FOR THIS PROJECT. THE CONTRACTOR SHALL ADHERE TO THE GUIDELINES SPECIFIED THEREIN AND SHALL COORDINATE WITH THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
11. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), U.S. DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
12. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
13. ALL SAWCUT PAVEMENT SHALL HAVE A UNIFORM EDGE AND BE SPRAYED WITH TACK PRIOR TO PLACEMENT OF ADJACENT PAVING.
14. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENTS, PAVEMENT MARKINGS, CURB & GUTTER, DRIVE PADS, WHEELCHAIR RAMPS, AND SIDEWALK DURING CONSTRUCTION. APART FROM THOSE SECTIONS INDICATED FOR REMOVAL ON THE PLANS AND SHALL REPAIR OR REPLACE PER COA STANDARDS AT HIS OWN EXPENSE.
15. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR CONSTRUCTION OBSERVER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXCAVATIONS AND TRENCHES IN A SAFE CONDITION THEREBY PROTECTING THE WORKERS AND THE GENERAL PUBLIC. ALL EXCAVATIONS, TRENCHING AND SHORING ACTIVITIES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) 29 CFR 1926.650, SUBPART P.
17. FOR THE PURPOSE OF THIS PLAN SET "OWNER" MEANS THE CITY OF ALBUQUERQUE BIOLOGICAL PARK.

MARGCD GENERAL CONSTRUCTION NOTES

1. ANY WORK TO BE PERFORMED WITHIN THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT (M.R.G.C.D.) RIGHT-OF-WAY SHALL BE CLOSELY COORDINATED WITH THE M.R.G.C.D. ENGINEERING DEPARTMENT AND APPROPRIATE FIELD OFFICE. PHONE: (505) 247-0234.
2. NO WORK IS TO BE DONE ON FACILITIES OR STRUCTURES BELONGING TO, OR OPERATED BY, THE M.R.G.C.D. BETWEEN MARCH 1 AND OCTOBER 31 INCLUSIVE. HOWEVER, WORK MAY BE PERMITTED BY THE M.R.G.C.D. IF IT CAN BE SHOWN THAT THE WORK WILL NOT INTERFERE WITH OPERATIONS OF THE M.R.G.C.D. FACILITY. ALL WORK TO BE DONE WITHIN THE M.R.G.C.D. FACILITIES MUST BE APPROVED BY THE M.R.G.C.D. ENGINEER PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL NOT STORE EQUIPMENT, NEW MATERIALS OR DEBRIS WITHIN DISTRICT RIGHT-OF-WAY WHICH MAY INTERFERE WITH OPERATIONS AND MAINTENANCE OF THE M.R.G.C.D. FACILITY.
4. THE CONTRACTOR SHALL NOT SERVICE VEHICLES OR EQUIPMENT WITHIN M.R.G.C.D. RIGHT-OF-WAY.
5. SEEDING OF DISTURBED AREAS WITHIN M.R.G.C.D. RIGHT-OF-WAYS IS REQUIRED PER THE M.R.G.C.D. SEEDING SPECIFICATIONS.
6. THE CONTRACTOR MUST MAINTAIN A MINIMUM COVER OF 3' OVER ALL CULVERT CROSSINGS USED FOR ACCESS TO THE PROJECT SITE.
7. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND/OR REPLACEMENT OF ANY STRUCTURES REMOVED AND/OR DAMAGED DUE TO THE CONTRACTOR'S ACTIVITIES WITHIN THE DISTRICT'S RIGHT-OF-WAY. SHOULD ANY TURNOUTS, CULVERT PIPES AND/OR STRUCTURES REQUIRE REPLACEMENT DUE TO LEAKAGE AND/OR DAMAGE BY THE CONTRACTOR, NEW TURNOUTS, AND NEW CULVERT PIPES AND/OR NEW STRUCTURES SHALL REPLACE THE DAMAGED ITEM. REPAIRS AND/OR REPLACEMENTS WITHIN THE DISTRICT'S RIGHT-OF-WAY MUST COMPLY WITH M.R.G.C.D. SPECIFICATIONS.
8. ALL DAMAGED CULVERT CROSSINGS AND CULVERT CROSSINGS REMOVED AND/OR DISTURBED MUST BE RESTORED AND/OR REPLACED TO THE SATISFACTION OF THE M.R.G.C.D. AND COMPLY WITH M.R.G.C.D. SPECIFICATIONS.
9. ALL SALVAGEABLE CULVERTS, IRRIGATION GATES, ETC., MUST BE RETURNED TO THE M.R.G.C.D.
10. THE CONTRACTOR IS RESPONSIBLE FOR EXECUTING A "SPECIAL USE LICENSE AGREEMENT" WITH TH M.R.G.C.D. PRIOR TO CONSTRUCTION.

LEGEND

	BH1 HORIZONTAL & VERTICAL PANEL POINT		PAVED PARKING		GUARDRAIL
	SPOT ELEVATION		GRADED PARKING		POST/BOLLARD
	INDEX CONTOUR		FOOT PATH		TREE & TREE OUTLINE WITH TRUNK LOCATION
	INTERMEDIATE CONTOUR		BRIDGE WITH DECK ELEVATION		PINE TREE
	DEPRESSION INDEX CONTOUR		SPEED BUMP		BUSH/SHRUB
	DEPRESSION INTERMEDIATE CONTOUR		INTERMITTENT STREAM		FIRE HYDRANT
	OBSCURED AREA		PERENNIAL POND WITH WATER LEVEL ELEVATION		WATER METER
	BUILDING WITH PORCH/DECK		PERENNIAL STREAM		WATER VALVE
	CONCRETE PAD		CULVERT		IRRIGATION BOX
	RAMP		RIP-RAP		GAS VALVE
	STEPS		CURB & DROP INLET		PULLBOX
	SWIMMING POOL		UNLINED DITCH		TRANSFORMER
	TANK		CONCRETE DRAINAGE STRUCTURE		DISTRIBUTION LINE & POLE
	DIRT/DEBRIS PILE		SOLID STRIPE		DOWN GUY WIRE & ANCHOR
	TEES & GREENS		DOUBLE STRIPE		STREET LIGHT
	SAND		DASHED STRIPE		POST LIGHT
	LANDSCAPED AREA		HANDICAP PARKING SPACE		TRAFFIC CONTROL BOX
	SIDEWALK		PARKING BUMPER		TRAFFIC SIGNAL
	CURB		SINGLE, DOUBLE POST SIGNS, & BILLBOARD		SATELLITE DISH
	GUTTER		MASONRY WALL		PIPELINE
	PAVED ROAD		RETAINING WALL		UNIDENTIFIED FEATURE
	MISC. ASPHALT EDGE		ROCK WALL		UNIDENTIFIED VALVE
	GRADED ROAD		CHAINLINK FENCE WITH GATE		UNIDENTIFIED MANHOLE
	UNGRADED ROAD		RAIL FENCE		UNIDENTIFIED POLE
	UNGRADED SHOULDER		BARBWIRE FENCE		UNIDENTIFIED UTILITY

UTILITY COMPANY CONTACTS

ELECTRIC
PNM ELECTRIC SERVICES
(DISTRIBUTION)
ALBUQUERQUE, NM
PHONE: 241-3403
CONTACT: RICK MONTOYA

CABLE TV
COMCAST CABLE COMMUNICATIONS
ALBUQUERQUE, NM
PHONE: 761-6252
CONTACT: MIKE MORTUS

TELEPHONE
QWEST COMMUNICATIONS
ALBUQUERQUE, NM
PHONE: 245-6586
CONTACT: MARK KANTZ

AT&T
ALBUQUERQUE, NM
PHONE: 362-2743
CONTACT: AMOS WILSON

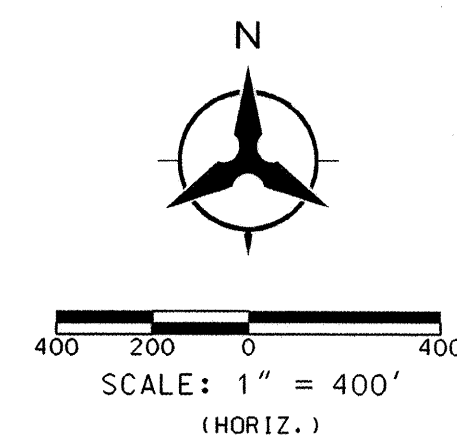
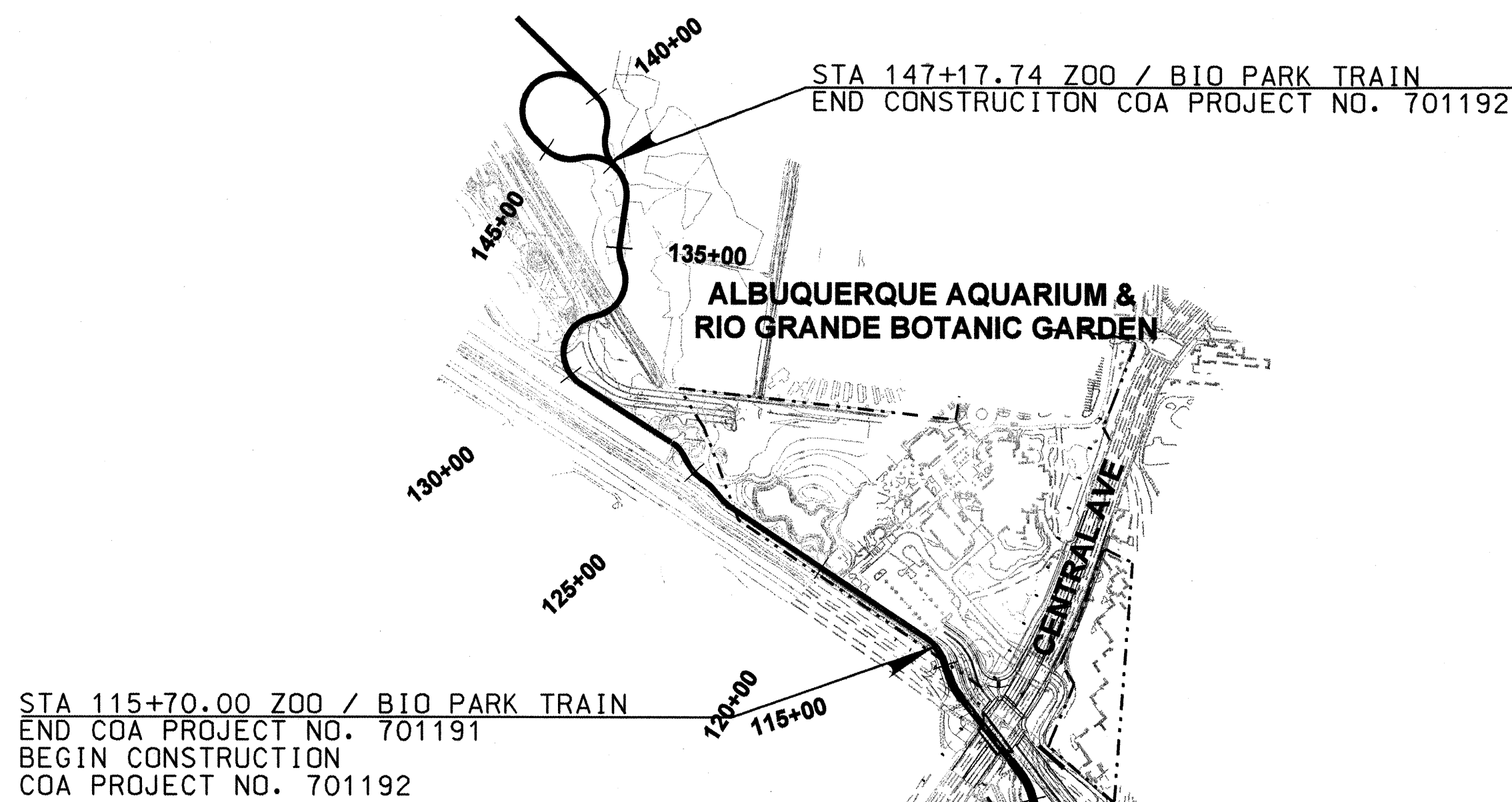
NATURAL GAS
PNM GAS SERVICES
ALBUQUERQUE, NM
PHONE: 241-7753
CONTACT: JOE DUNLAP

CITY OF ALBUQUERQUE
PRINCIPAL ENGINEER
ALBUQUERQUE, NM
PHONE: 768-2729
CONTACT: GREG OLSON

Bohannon & Huston
Court yard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN GENERAL NOTES & LEGEND			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	J-12, J-13, K-13	SHEET 2 OF 33
701192			

SCANNED BY
MESA REPRO



STA 7+25.00 TINGLEY DR
END CONSTRUCTION TINGLEY DR

STA 53+00.78 ZOO / BIO PARK TRAIN =
STA 4+28.02 TINGLEY DRIVE
CONSTRUCT 1-12'X11'X109.8' CBC

STA 1+80.00 TINGLEY DRIVE
BEGIN CONSTRUCTION TINGLEY DR

STA 48+80.25 ZOO / BIO PARK TRAIN
BEGIN CONSTRUCTION COA PROJECT NO. 701192

STA 52+16.84 ZOO / BIO PARK TRAIN
CONSTRUCT 14'X 7.33'X 18.75' CBC IN
MRGCD RIVERSIDE DRAIN

RIO GRANDE ZOO

Bohannon & Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

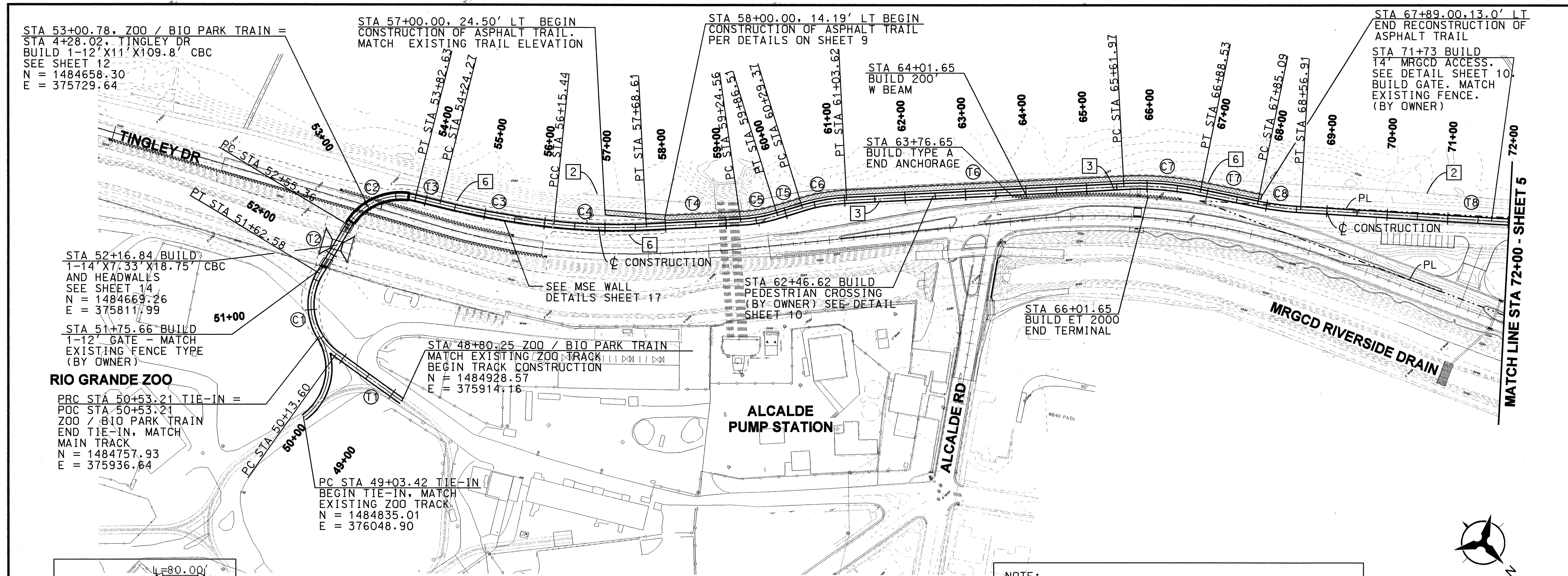
**ZOO / BIO PARK TRAIN
OVERALL PLAN**

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	

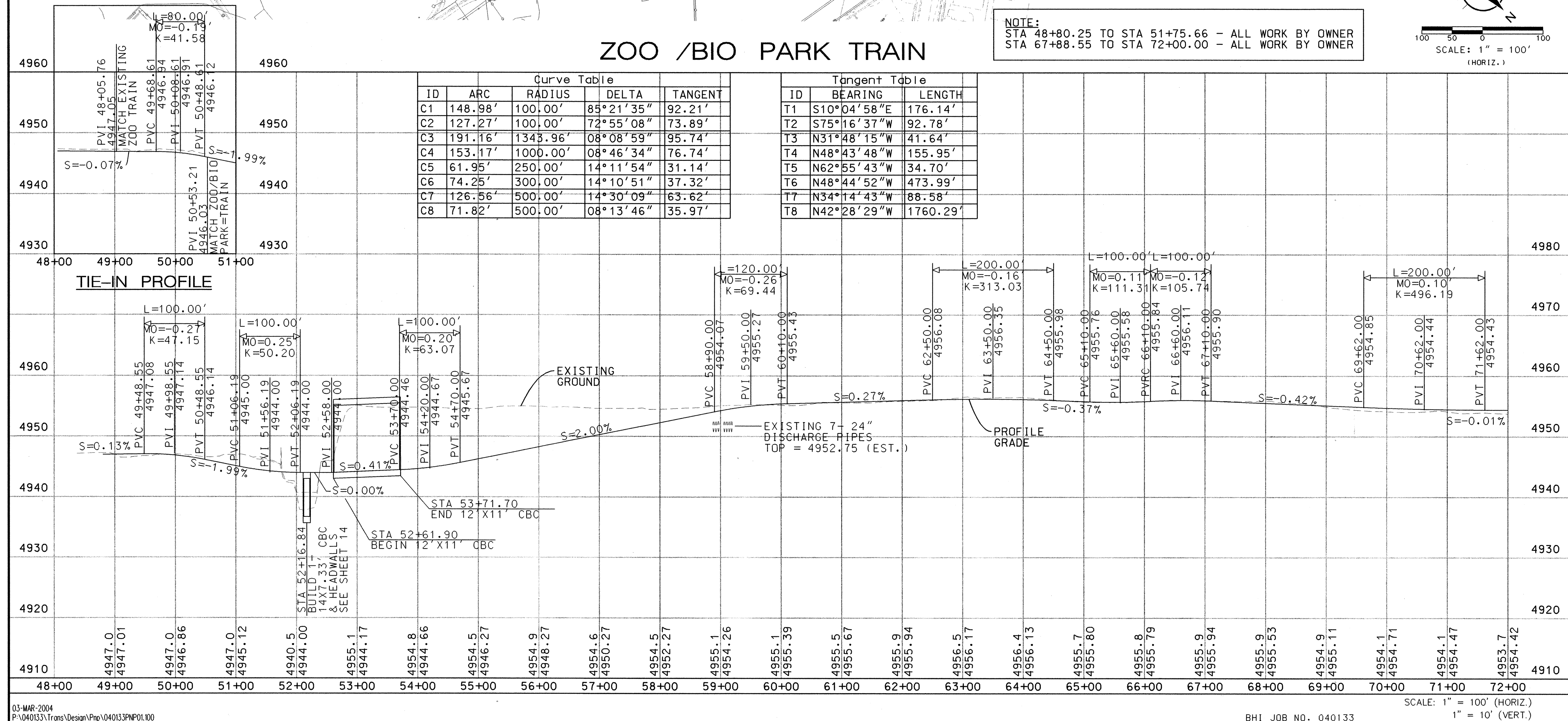
CITY PROJECT NO. 701192 ZONE MAP NO. J-12, J-13, K-13 SHEET 3 OF 33

RECORD DRAWING

SCANNED BY
MESA REPRO



ZOO / BIO PARK TRAIN



KEYED NOTES

- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

NOTES

1. CONSTRUCT METAL BARRIER & END ANCHORS PER COA STD DWGS 2610, 2615, 2620, 2625, 2626, & 2631.
2. TRAFFIC TO BE DETOURED DURING CONSTRUCTION AS DETAILED IN COA PROJECT NO. 701291.
3. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TEMPORARY MULTI-USE TRAIL DURING CONSTRUCTION AS NEEDED IN ACCORDANCE WITH SECTION 1200.
4. TRACK SWITCH GEOMETRY, LOCATION, AND TYPE TO BE DETERMINED BY OWNER

- TINGLEY DRIVE IMPROVEMENTS NORTH OF ZOO / BIO PARK TRAIN STA 59+00 CONSTRUCTED WITH COA PROJECT NO. 701291
- IMPROVEMENTS TO TINGLEY PONDS & WETLANDS CONSTRUCTED BY OTHERS

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PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRACK ALIGNMENT PLAN & PROFILE
BOP TO STA 72+00

DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL

APPROVED MAR - 9 2004

APPROVED MAR - 9 2004

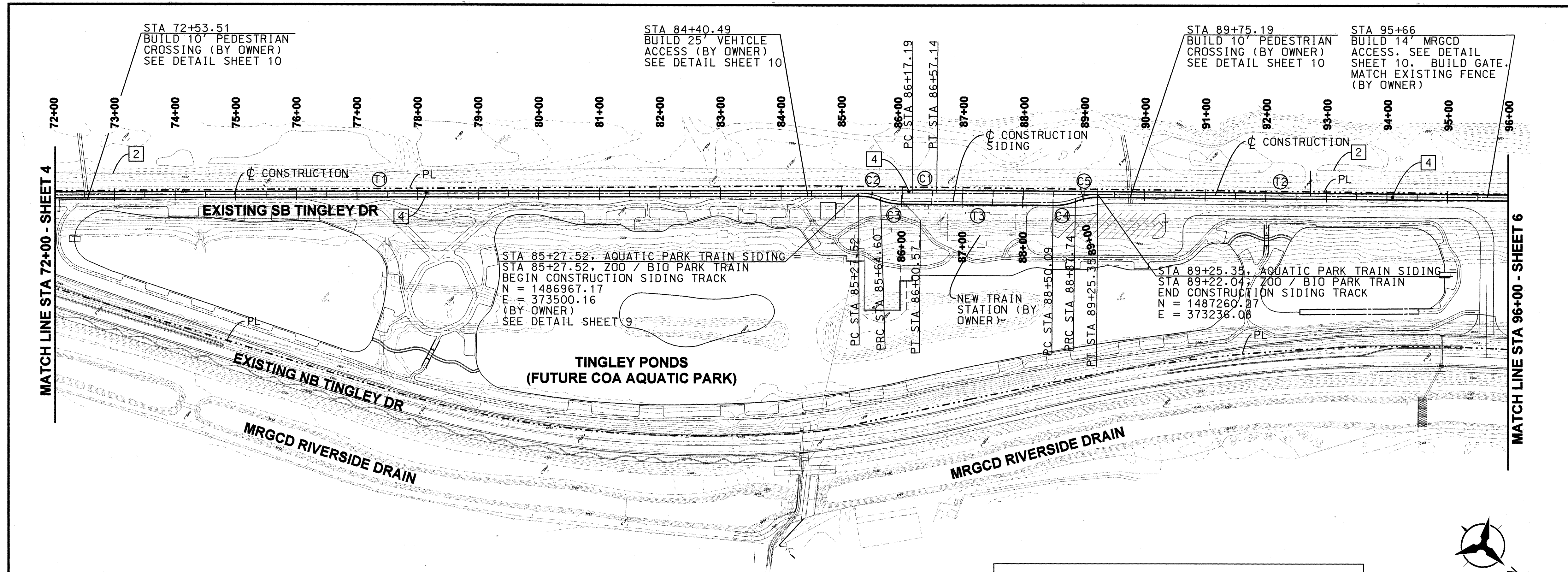
LAST DESIGN UPDATE

CITY PROJECT NO. 701192

ZONE MAP NO. J-12, J-13, K-13

SHEET 4 OF 33

RECORD DRAWING



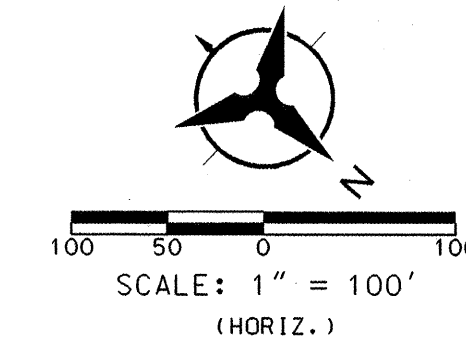
KEYED NOTES

- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

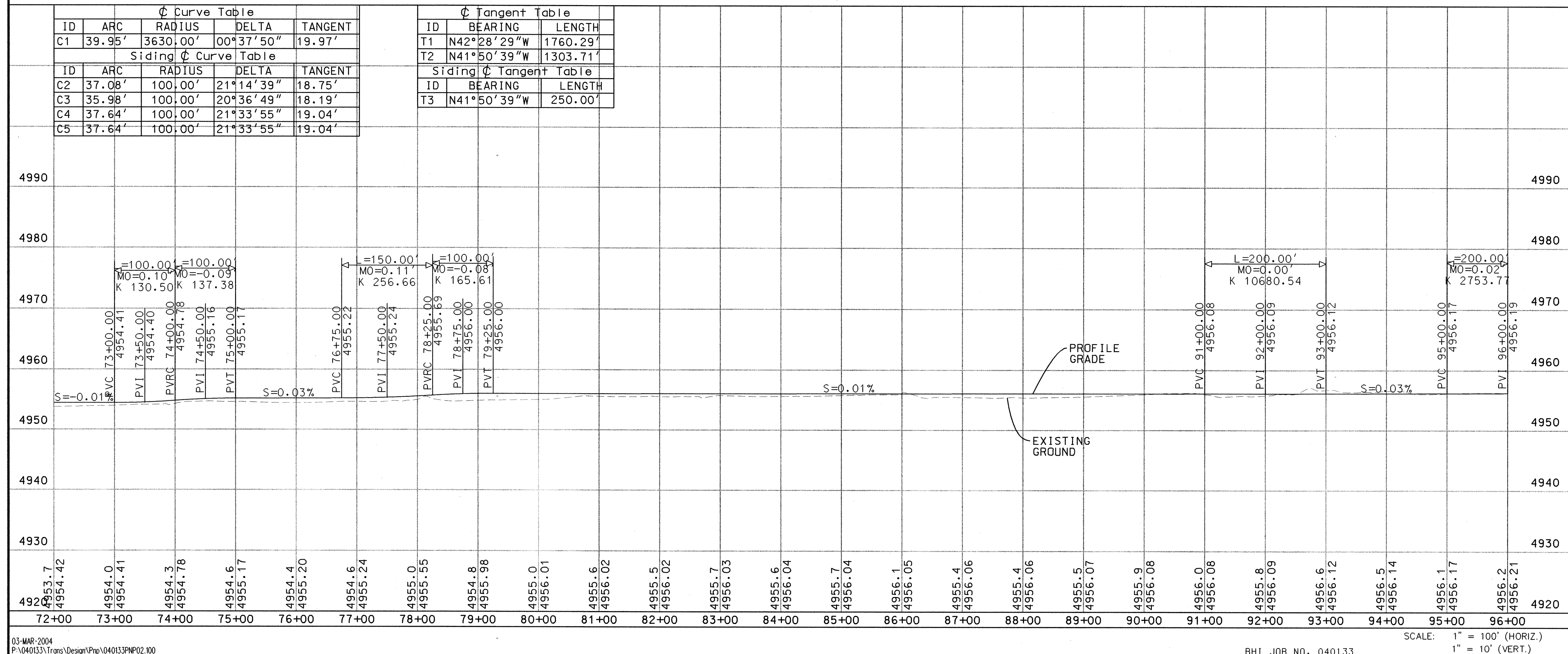
NOTES

1. TRACK SWITCH GEOMETRY, LOCATION, AND TYPE TO BE DETERMINED BY OWNER

NOTE:
STA 72+00.00 TO STA 96+00.00 - ALL WORK BY OWNER



ZOO /BIO PARK TRAIN



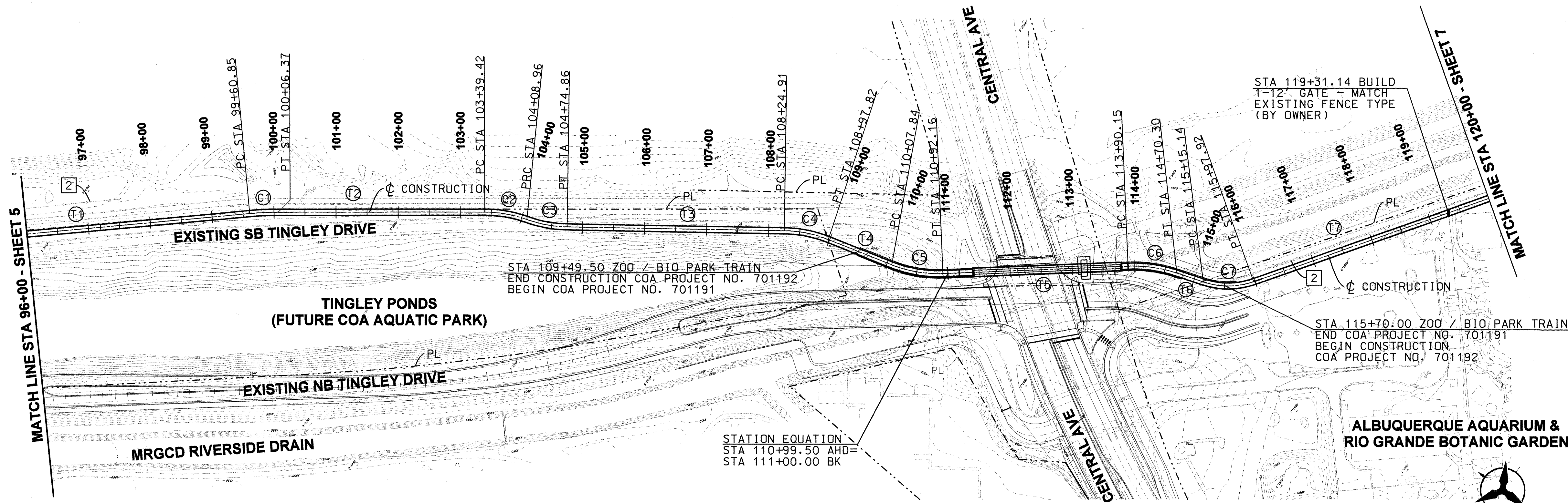
- TINGLEY DRIVE IMPROVEMENTS NORTH OF ZOO / BIO PARK TRAIN STA 59+00 CONSTRUCTED WITH COA PROJECT NO. 701291
- IMPROVEMENTS TO TINGLEY PONDS & WETLANDS CONSTRUCTED BY OTHERS

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ZOO / BIO PARK TRAIN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO. 701192		ZONE MAP NO. J-12, J-13, K-13	SHEET 5 OF 33

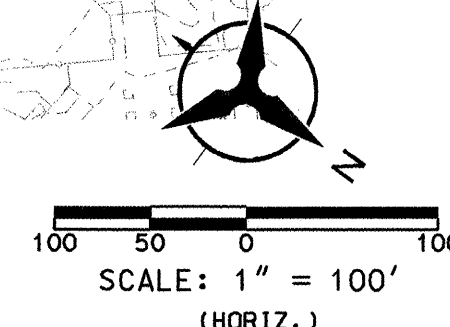


KEYED NOTES

- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

ZOO / BIO PARK TRAIN

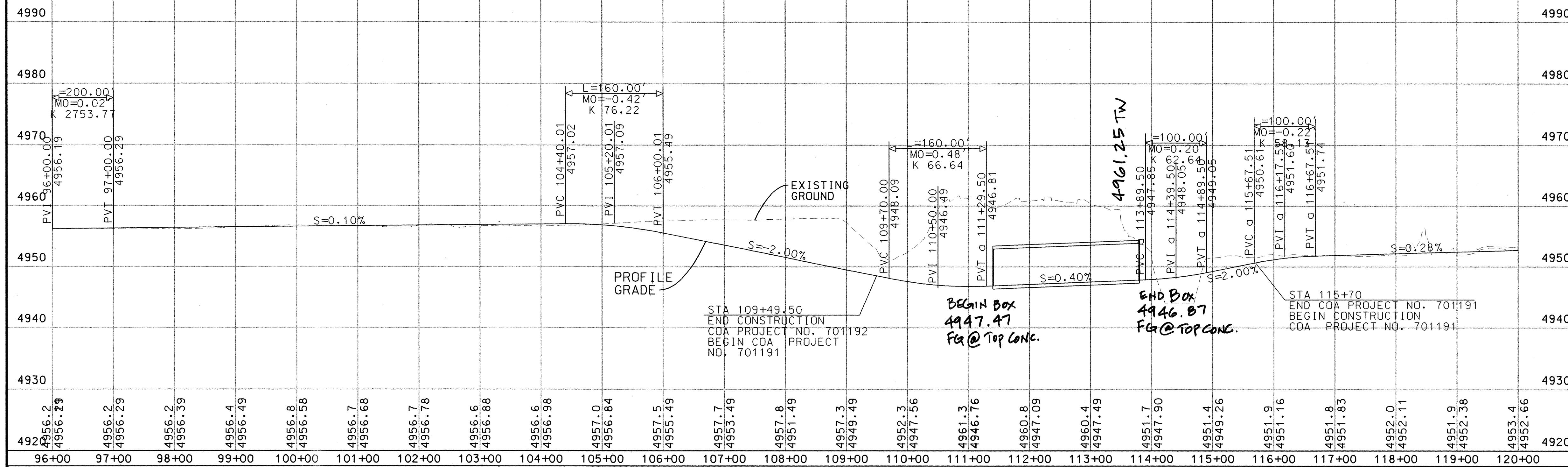
NOTE:
STA 96+00 TO STA 109+49.50 - ALL WORK BY OWNER
STA 115+70 TO STA 120+00 - ALL WORK BY OWNER



NIC

ID	ARC	RADIUS	DELTA	TANGENT
C1	45.52'	500.00'	05°12'59"	22.78'
C2	69.54'	200.00'	19°55'23"	35.13'
C3	65.90'	199.99'	18°52'43"	33.25'
C4	72.91'	200.00'	20°53'09"	36.86'
C5	84.31'	200.00'	24°09'16"	42.79'
C6	80.15'	218.68'	21°00'00"	40.53'
C7	82.79'	123.88'	38°17'21"	43.01'

ID	BEARING	LENGTH
T1	N41°50'39"W	1303.71'
T2	N36°37'40"W	333.05'
T3	N35°35'00"W	350.05'
T4	N14°41'51"W	110.02'
T5	N38°51'07"W	298.50'
T6	N17°51'07"W	44.84'
T7	N56°08'28"W	747.49'



- TINGLEY DRIVE IMPROVEMENTS NORTH OF ZOO / BIO PARK TRAIN STA 59+00 CONSTRUCTED WITH COA PROJECT NO. 701291
- IMPROVEMENTS TO TINGLEY PONDS & WETLANDS CONSTRUCTED BY OTHERS
- TINGLEY DRIVE/CENTRAL AVENUE INTERSECTION IMPROVEMENTS CONSTRUCTED WITH COA PROJECT NO. 701191

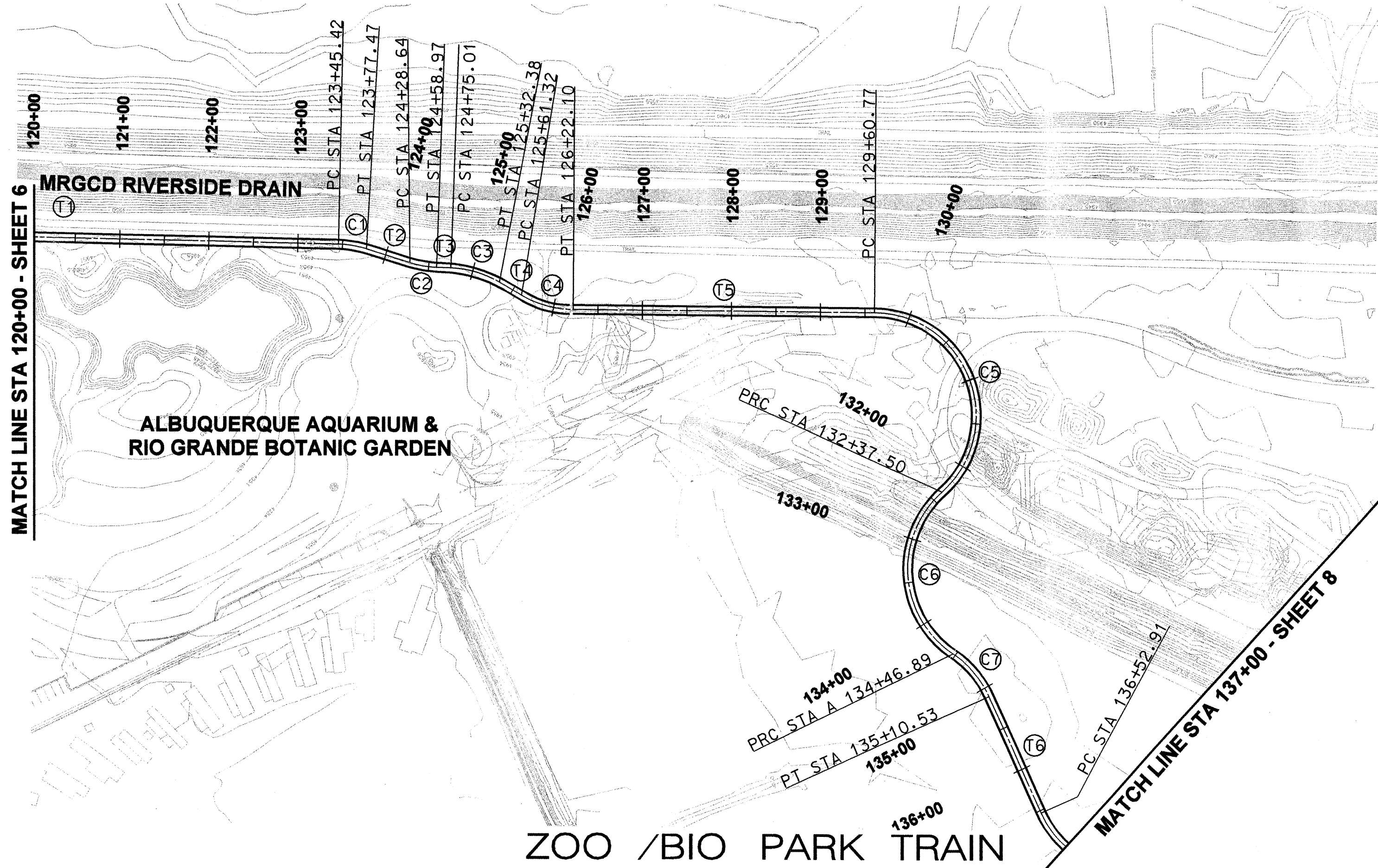
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 ENGINEERING DEVELOPMENT GROUP

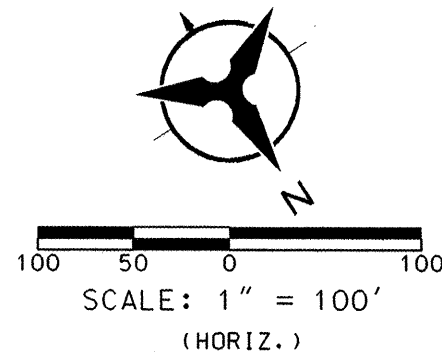
ZOO / BIO PARK TRAIN
 TRACK ALIGNMENT PLAN & PROFILE
 STA 96+00 TO STA 120+00

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
MAR - 9 2004	MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		

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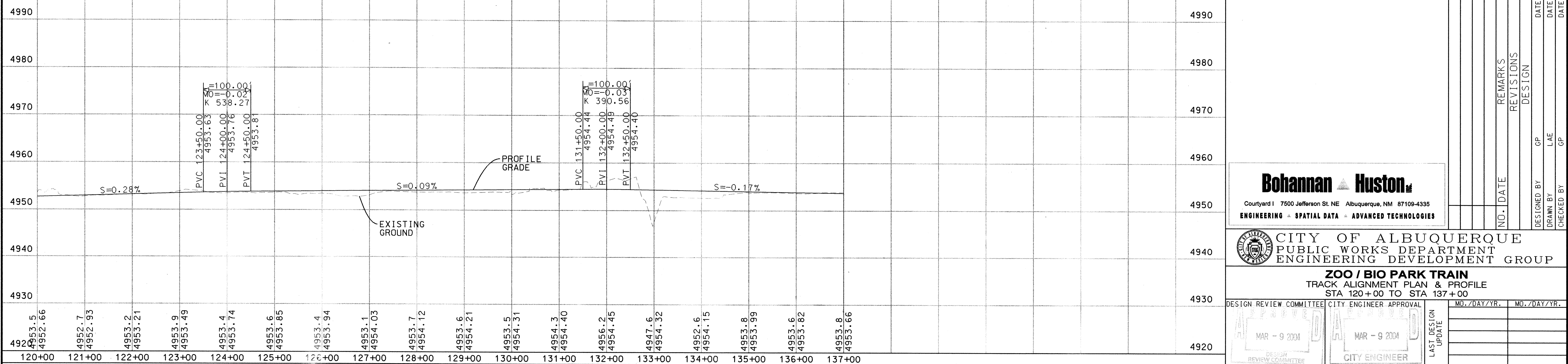


NOTE:
STA 120+00 TO STA 137+00 - ALL WORK BY OWNER



Curve Table				
ID	ARC	RADIUS	DELTA	TANGENT
C1	32.05'	115.00'	15°58'05"	16.13'
C2	30.33'	115.00'	15°06'43"	15.25'
C3	57.37'	115.00'	28°34'59"	29.29'
C4	60.79'	115.00'	30°17'06"	31.12'
C5	276.73'	115.00'	137°51'58"	298.54'
C6	208.92'	115.00'	104°05'13"	147.42'
C7	63.18'	115.00'	31°28'32"	32.41'

Tangent Table		
ID	BEARING	LENGTH
T1	N56°08'28"W	747.49'
T2	N40°10'23"W	51.17'
T3	N55°17'06"W	16.04'
T4	N26°42'08"W	28.93'
T5	N56°59'14"W	338.67'
T6	N08°16'03"E	142.38'



30-JAN-2004
P:\040133\Trans\Design\Prp\040133PNP04.100

BHI JOB NO. 040133

SCALE: 1" = 100' (HORIZ.)
1" = 10' (VERT.)

Bohannon  **Huston** INC.

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

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 CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRACK ALIGNMENT PLAN & PROFILE
STA 120+00 TO STA 137+00

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DATE UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED	APPROVED			
MAR - 9 2004	MAR - 9 2004			
DESIGN REVIEW COMMITTEE	CITY ENGINEER			

CITY PROJECT NO.	701192	ZONE MAP NO.	J-12, J-13, K-13	SHEET	7	OF	33 28
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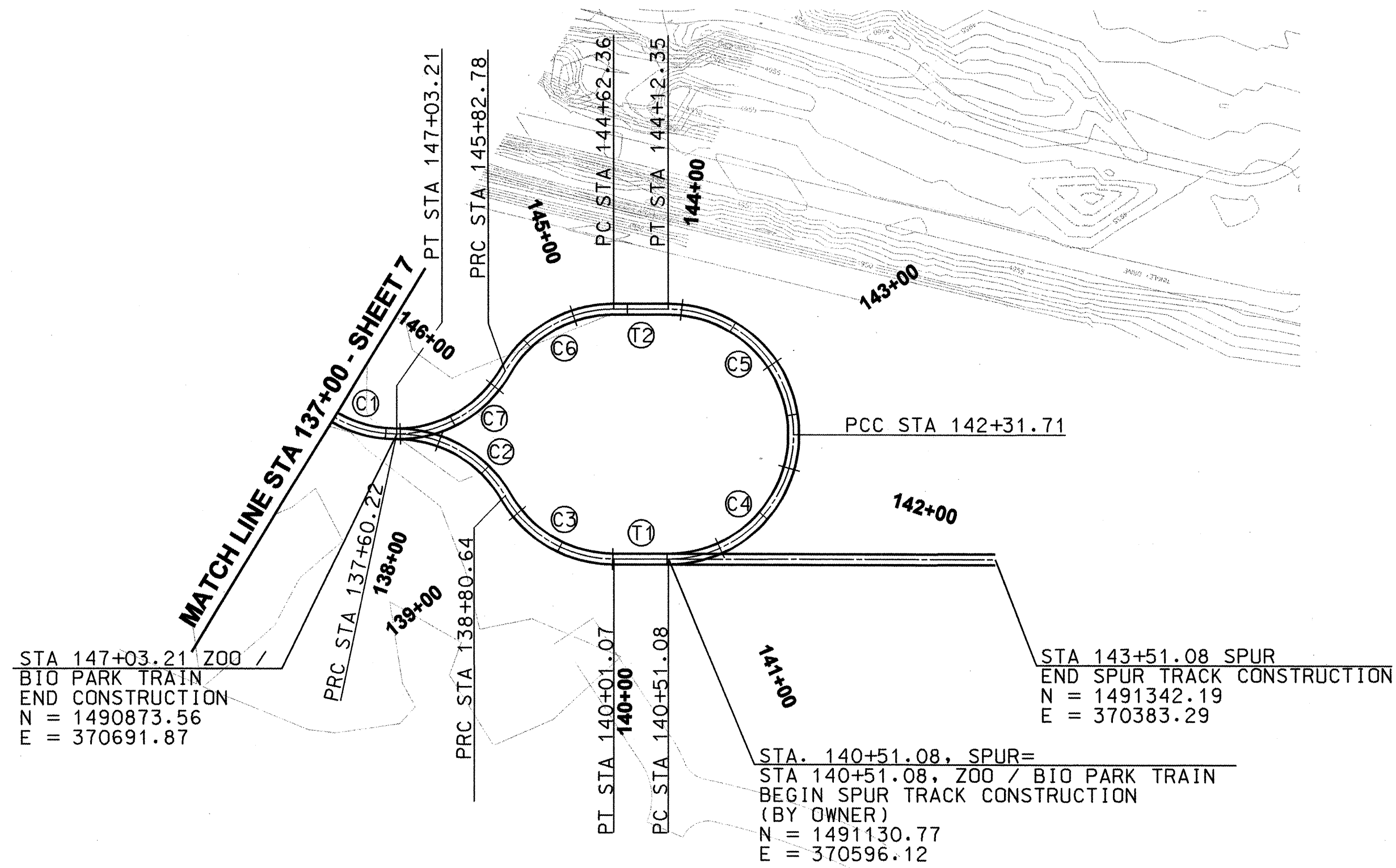
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SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
NO.	FIELD NOTES DATE BY			CONTRACTOR	WORK PERFORMED BY
		ACS BRASS TABLET STAMPED "14-112"			
		ON CENTRAL AVE. 29.5' NE OF			
		EXISTING EXPANSION JOINT ON THE RIO		INSPECTOR'S	DATE
		GRANDE BRIDGE.		ACCEPTANCE BY	
		STATE PLANE COORDINATES (CENTRAL		VERIFICATION BY	DATE
		ZONE, NAD27)		DRAWINGS	DATE
		N=1488959.78 E=371837.70 (GROUND)		CORRECTED BY	
		GROUND TO GRID FACTOR = 0.99968083		RECORDED BY	DATE
		ELEVATION = 4962.83 (NGVD 29)		NO.	

KEYED NOTES

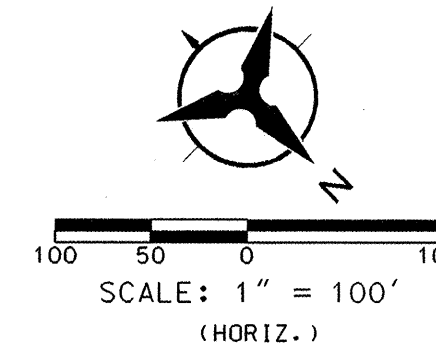
- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

NIC



ZOO /BIO PARK TRAIN

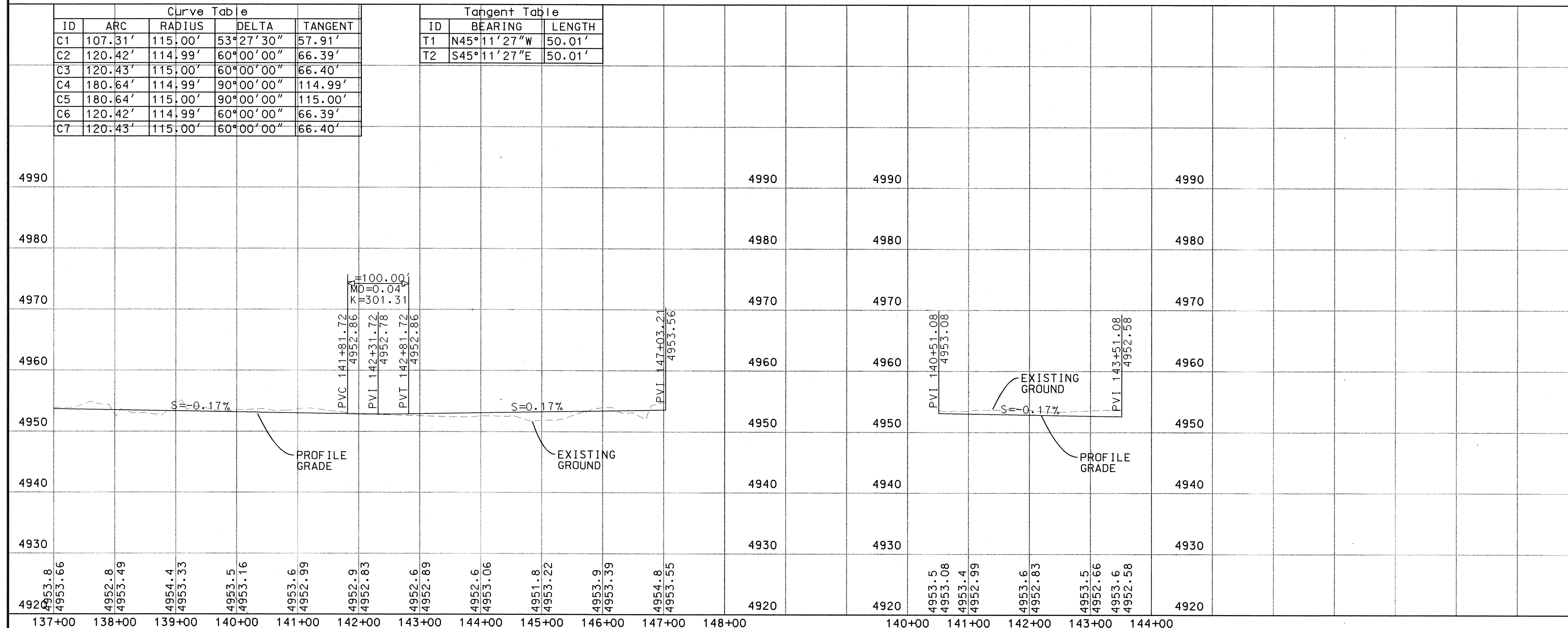
NOTE:
STA 137+00 TO STA 147+03.21 - ALL WORK BY OWNER



NIC

Curve Table				
ID	ARC	RADIUS	DELTA	TANGENT
C1	107.31'	115.00'	53°27'30"	57.91'
C2	120.42'	114.99'	60°00'00"	66.39'
C3	120.43'	115.00'	60°00'00"	66.40'
C4	180.64'	114.99'	90°00'00"	114.99'
C5	180.64'	115.00'	90°00'00"	115.00'
C6	120.42'	114.99'	60°00'00"	66.39'
C7	120.43'	115.00'	60°00'00"	66.40'

Tangent Table		
ID	BEARING	LENGTH
T1	N45°11'27"W	50.01'
T2	S45°11'27"E	50.01'



03-MAR-2004
P:\040133\Trans\Design\Prop\040133\PROP05.100

SPUR PROFILE

BHI JOB NO. 040133

SCALE: 1" = 100' (HORIZ.)
1" = 10' (VERT.)

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PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRACK ALIGNMENT PLAN & PROFILE
STA 137+00 TO EOP

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		

CITY PROJECT NO. 701192
ZONE MAP NO. J-12, J-13, K-13
SHEET 8 OF 33

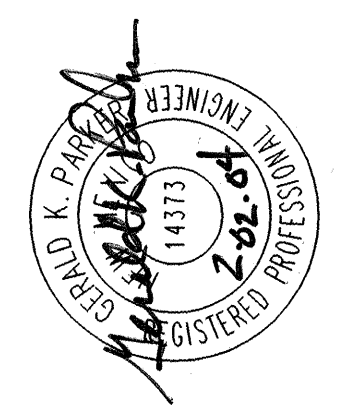
KEYED NOTES

- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

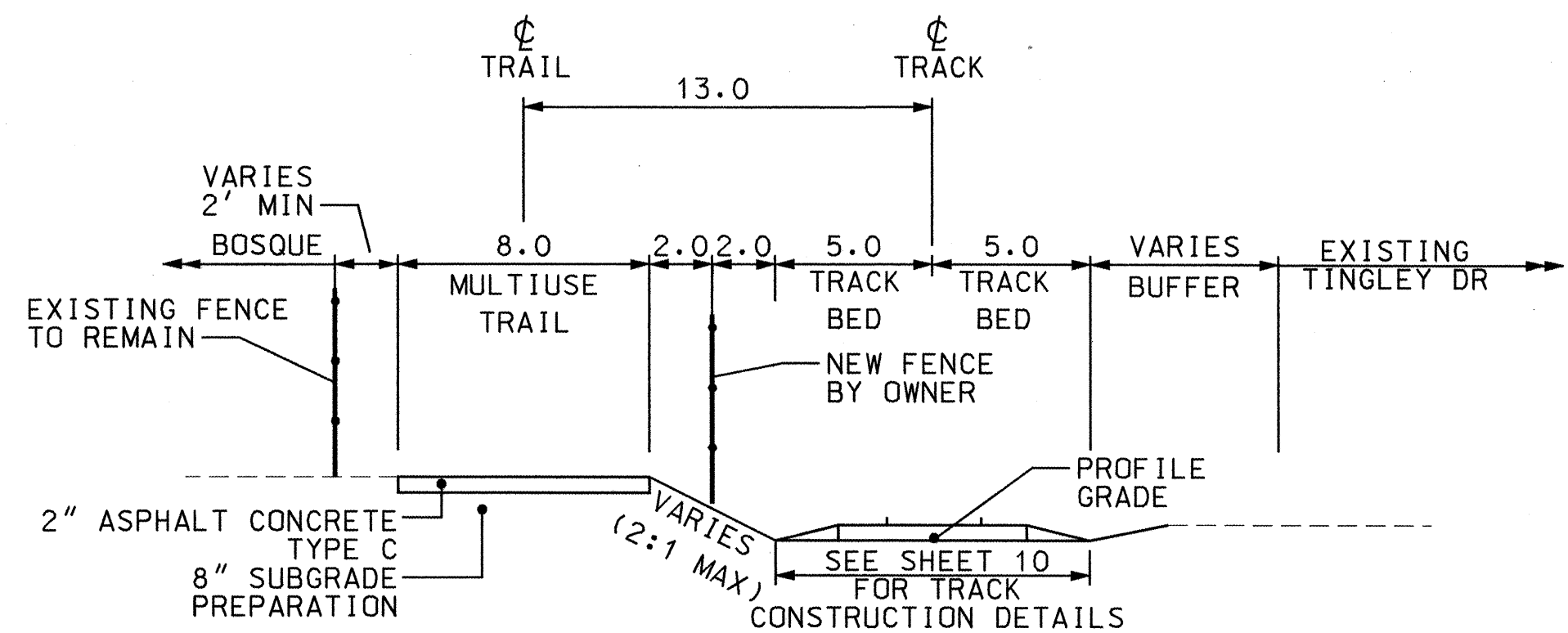
NOTES

1. TRACK SWITCH GEOMETRY, LOCATION, AND TYPE TO BE DETERMINED BY OWNER

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
NO.	DATE	BY	DATE	ACS BRASS TABLE STAMPED "14-J12"	ON CENTRAL AVE. 29.5' NE OF	CONTRACTOR	DATE
				EXISTING EXPANSION JOINT ON THE RID		INSPECTOR'S	DATE
				GRANDE BRIDGE.		FIELD	DATE
				STATE PLANE COORDINATES (CENTRAL		VERIFICATION BY	DATE
				ZONE - NAD27)		CORRECTED BY	DATE
				N=1488959.78 E=371837.70 (GROUND)		MICRO-FILM INFORMATION	DATE
				GROUND TO GRID FACTOR = 0.99968083		RECORDED BY	DATE
				ELEVATION = 4962.83 (NGVD 29)		NO.	

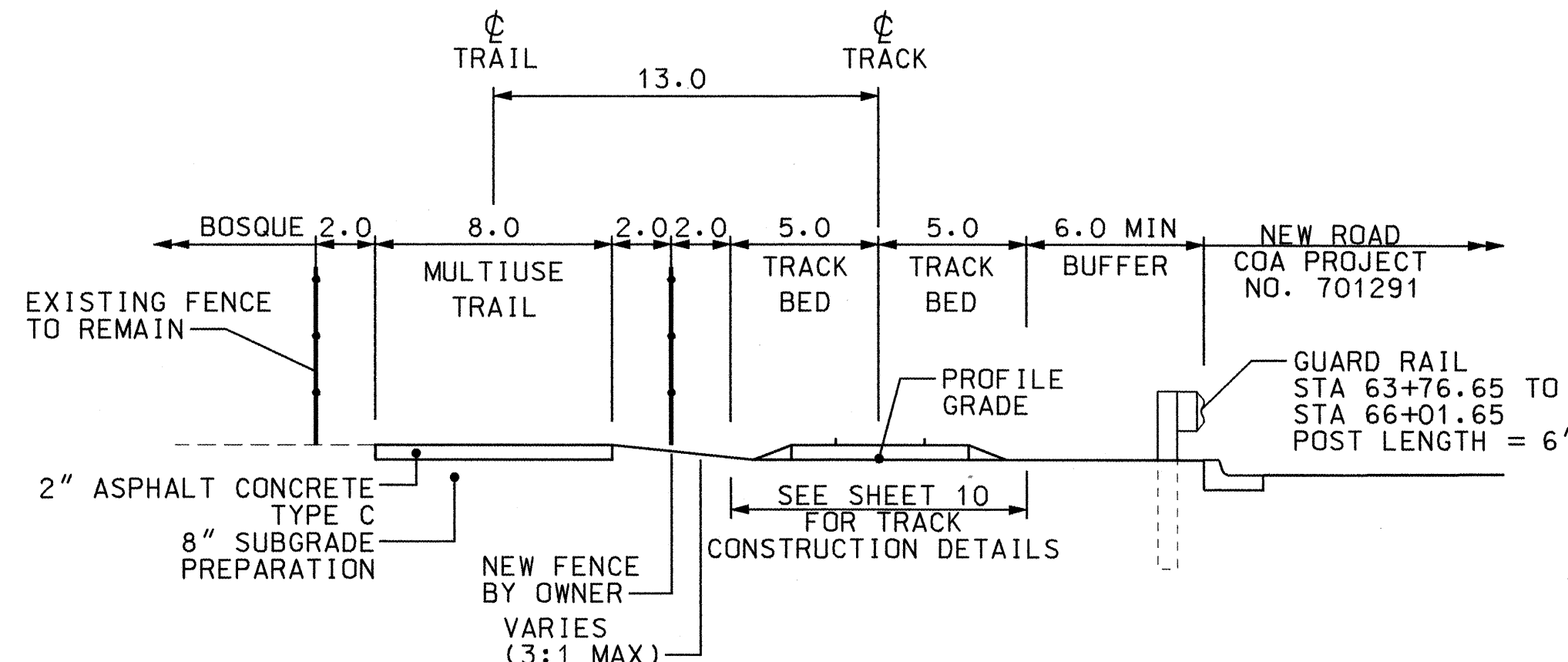


NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED BY	GP	DATE	1/2004
DRAWN BY	LAE	DATE	1/2004
CHECKED BY	GP	DATE	1/2004



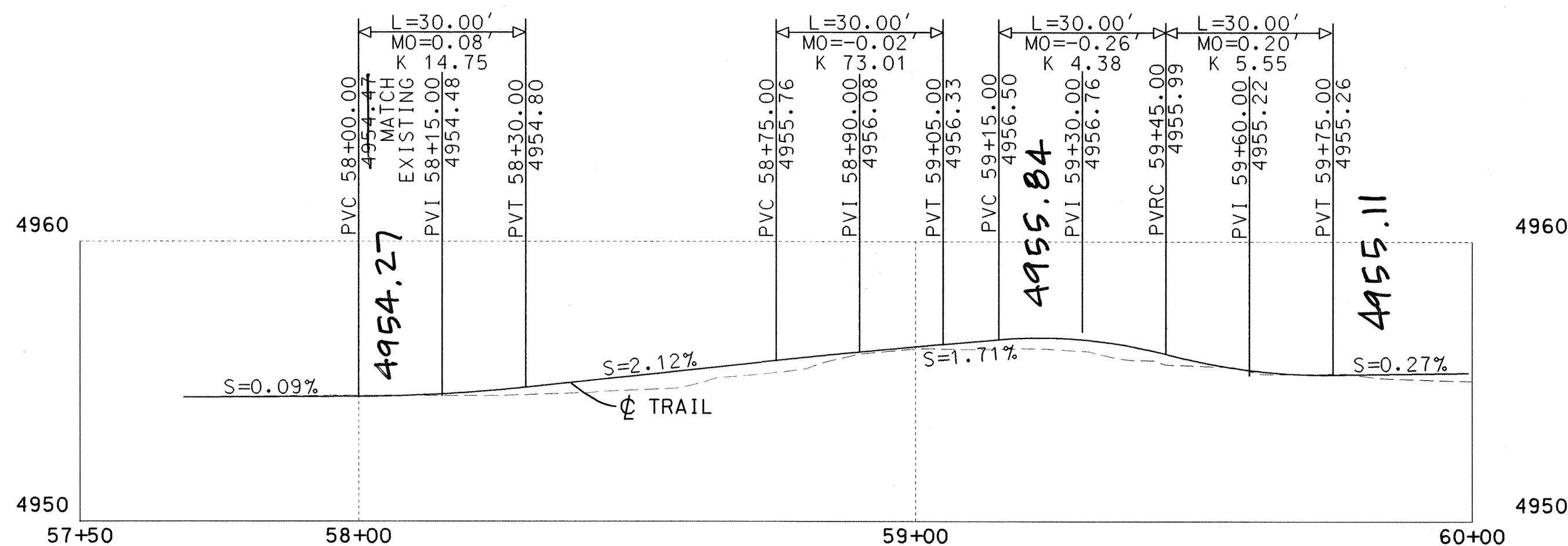
TRAIL RECONSTRUCTION AREA - TYPICAL SECTION "A"

STA 58+00.00 TO STA 59+75.00
(FOR STA 58+00.00 TO STA 59+75 SEE
PROFILE DETAIL BELOW FOR TRAIL ELEVATIONS)

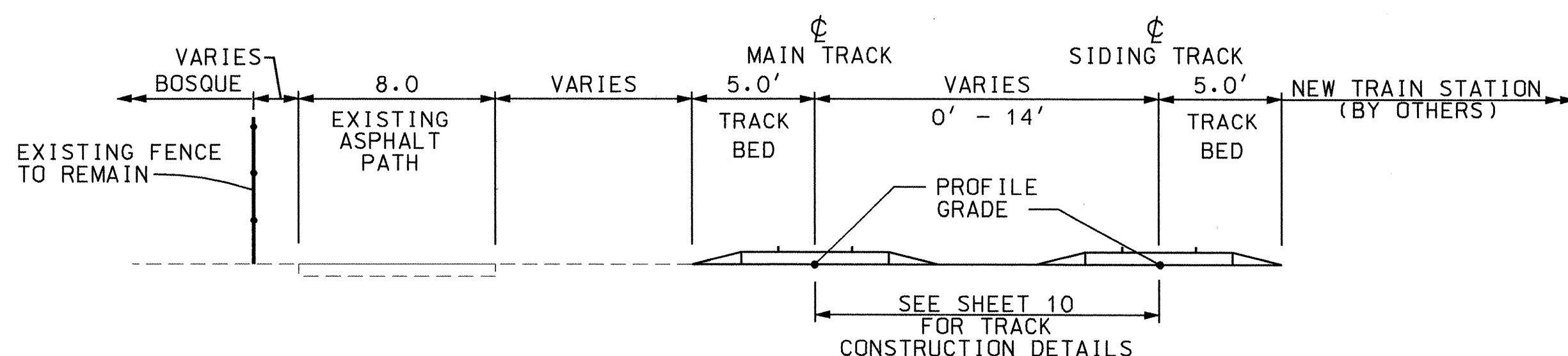


TRAIL RECONSTRUCTION AREA - TYPICAL SECTION "B"

STA 59+75 TO STA 67+65 (FOR STA 59+75 TO
STA 67+65 TRAIL TO MATCH PROFILE GRADE OF TRACK BED.
SEE SHEET 4 FOR TRACK BED PROFILE ELEVATIONS)
STA 67+65 TO STA 67+89.00 TRANSITION TO EXISTING TRAIL

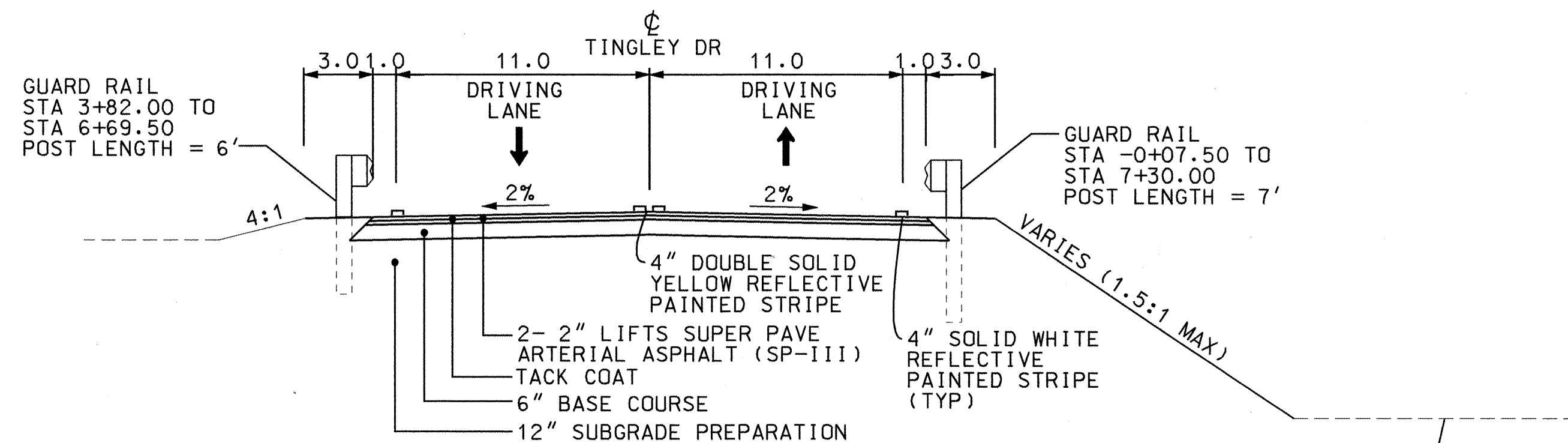


TRAIL RECONSTRUCTION AREA - TRAIL PROFILE DETAIL



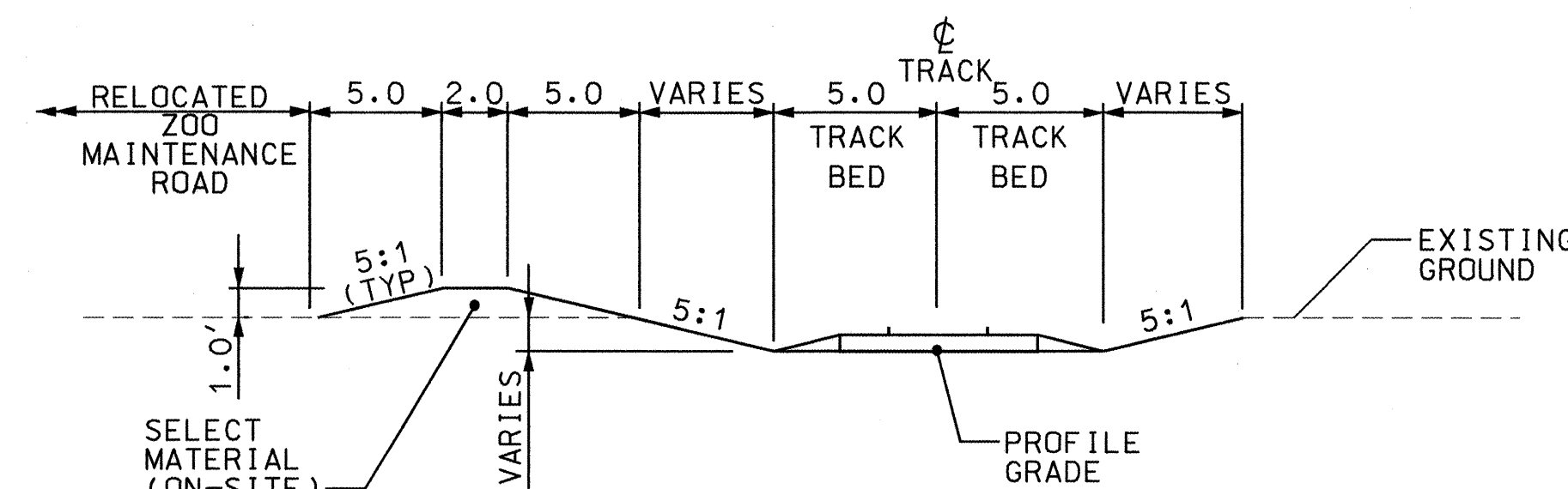
TYPICAL SECTION - AQUATIC PARK SIDING

STA 85+27.57 TO STA 89+22.04
ZOO / BIO PARK TRAIN



TYPICAL SECTION - TINGLEY DRIVE

STA 1+80.00 TO STA 7+25.00



TYPICAL SECTION - RUNOFF DIVERSION BERM

STA 50+00 TIE-IN TO STA 51+75.66 ZOO / BIO PARK TRAIN

NOTES

1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
2. NATIVE GRASS SEEDING IN ACCORDANCE WITH SECTION 1012 REQUIRED ON ALL DISTURBED AREAS.

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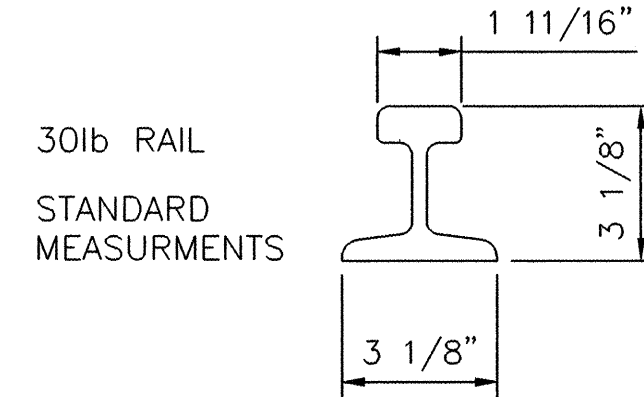
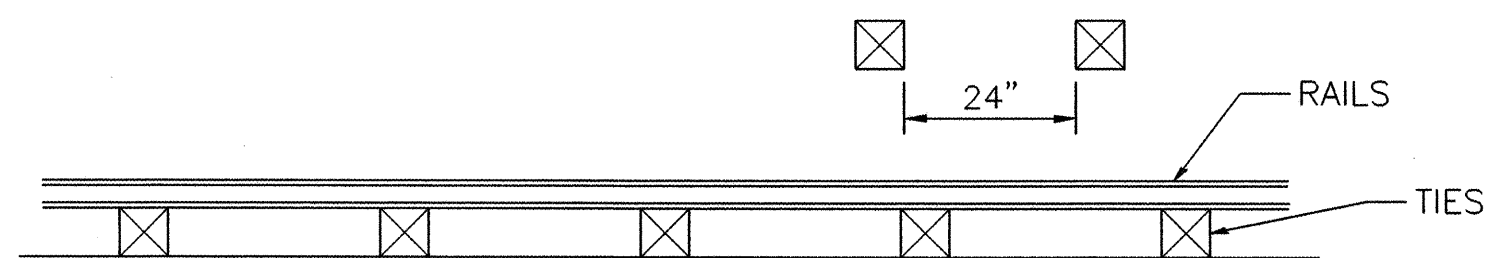
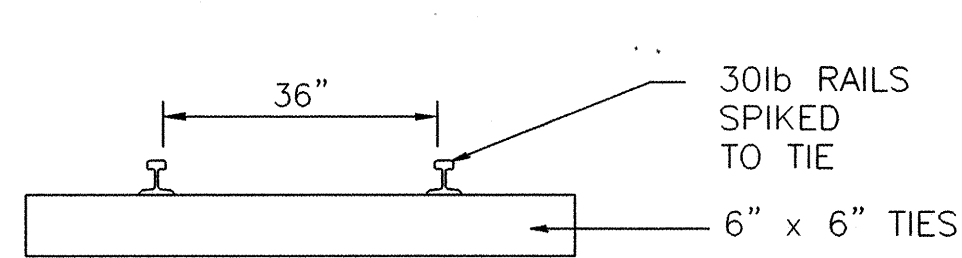
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRACK & TINGLEY TYPICAL SECTIONS

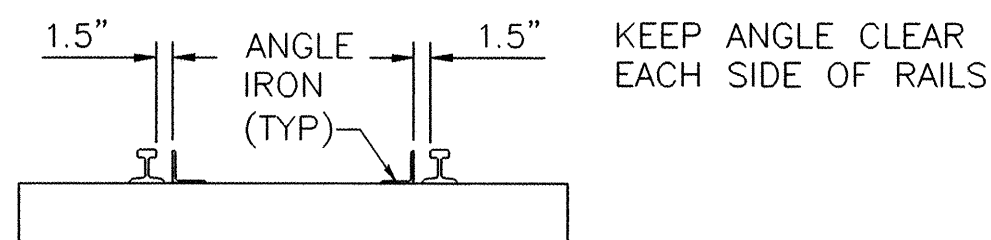
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
701192	J-12, J-13, K-13	9	33

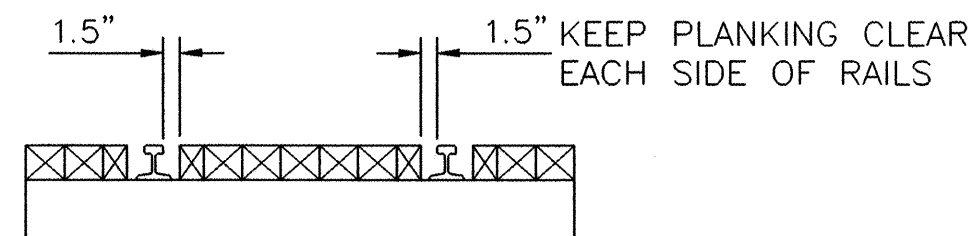
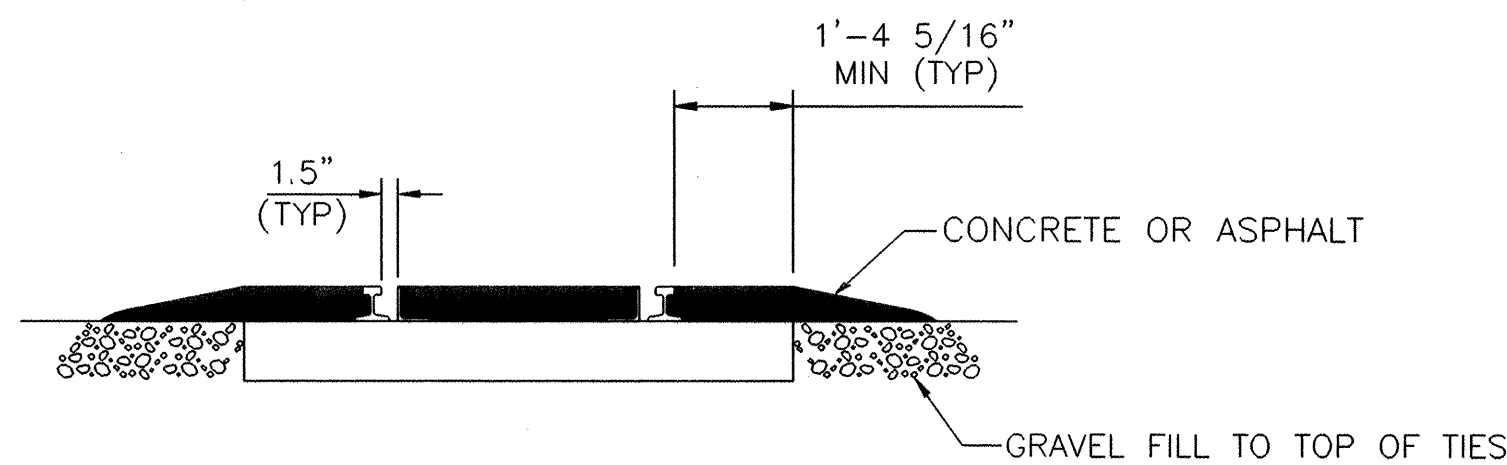
RECORD DRAWING



A. LAY 6" x 6" TIES 2.5' SPACING O.C. ON LEVEL DRY GROUND, SPIKE DOWN RAILS 36" APART (INSIDE RAIL TO INSIDE RAIL), FILL TO TOP OF TIES WITH GRAVEL.

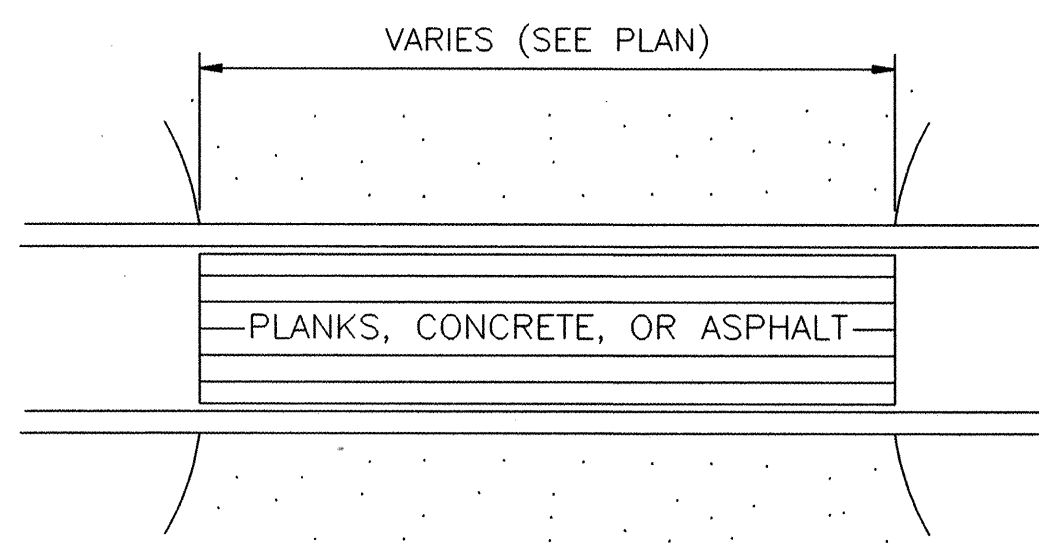


B. BOLT DOWN 3" x 3" ANGLE IRON 1.5" FROM RAILS



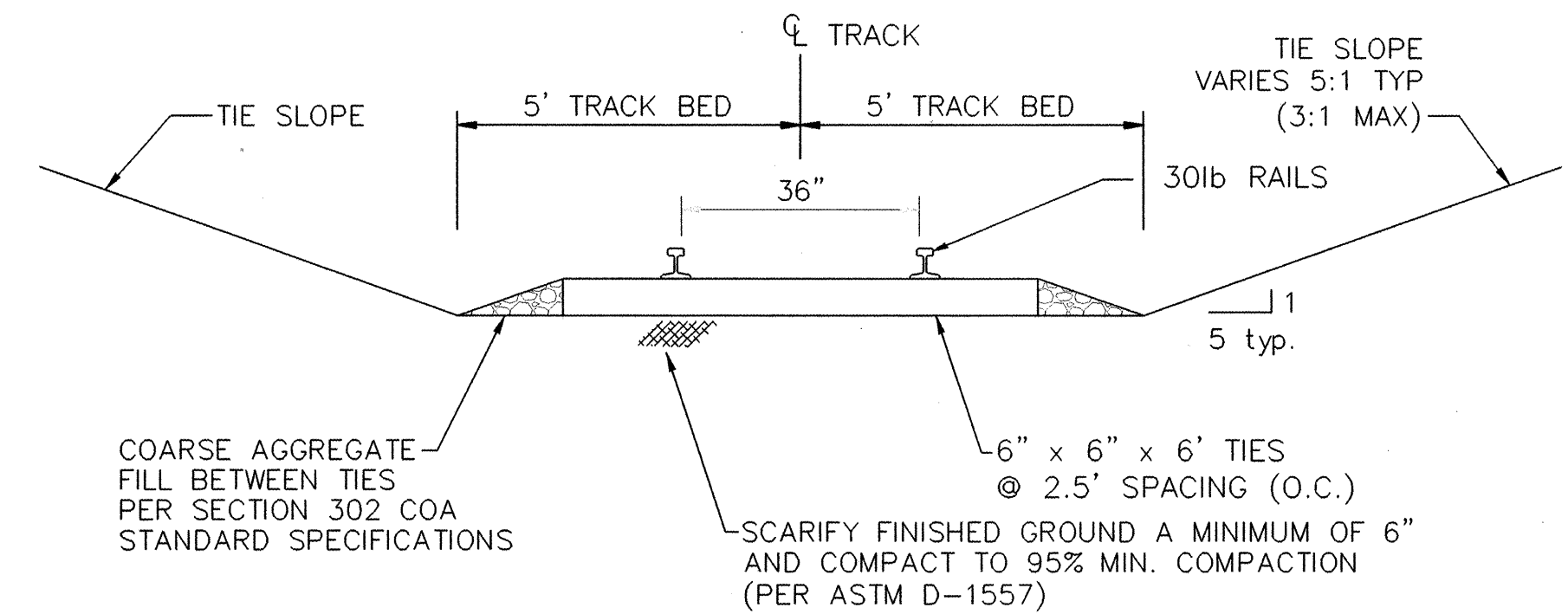
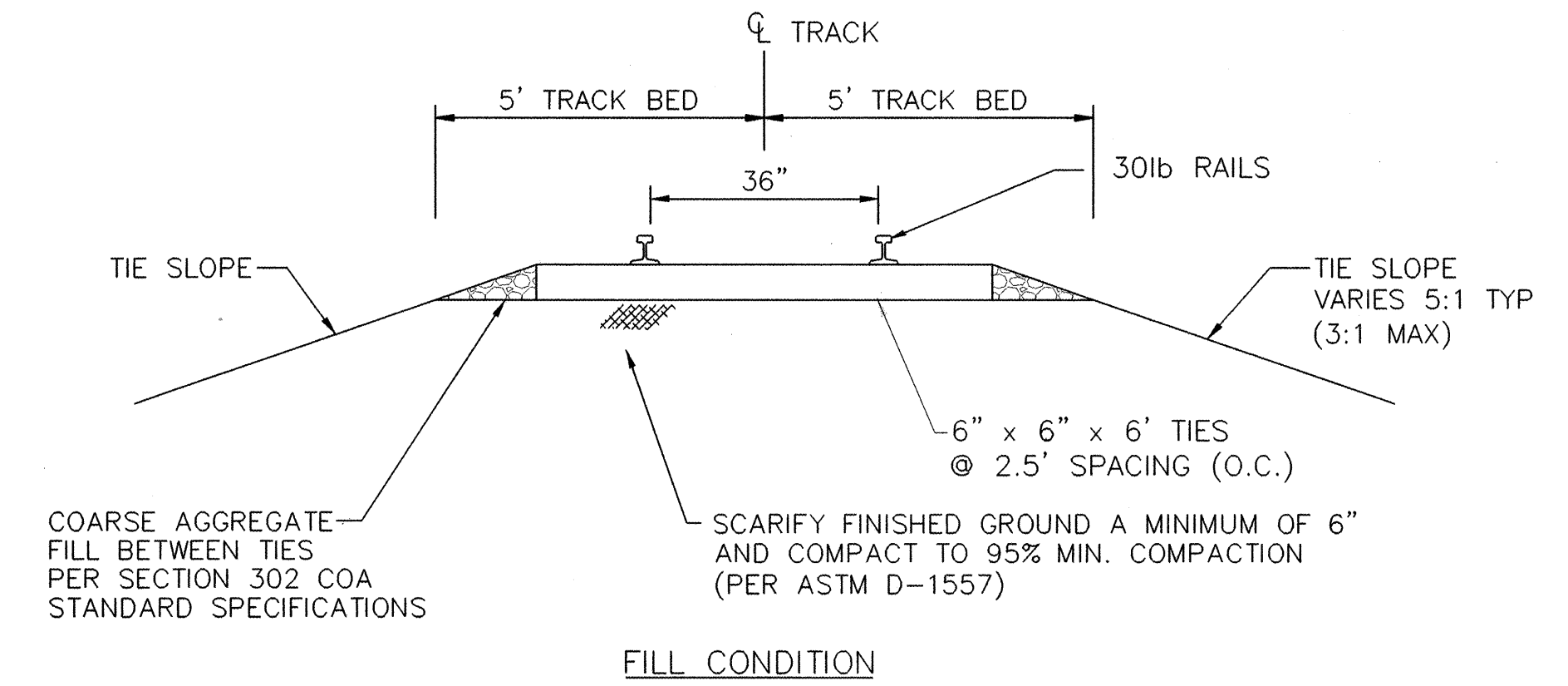
C. CONCRETE OR ASPHALT - TO FINISH THE RAMP POUR CONCRETE OR ASPHALT TIGHT AGAINST THE OUTSIDE RAILS, AND INSIDE ANGLE IRON.

TIMBER PLANKS - SPIKE SOLID PLANKING TO TIES, LEVEL WITH TOP OF RAILS (NO 3"x3" ANGLE IRON REQUIRED)



PLAN VIEW OF R.R. CROSSING

STANDARD LAYOUT FOR R.R. CROSSING FOR VEHICLES AND PEDESTRIANS



STANDARD GRADING DETAIL

NIC

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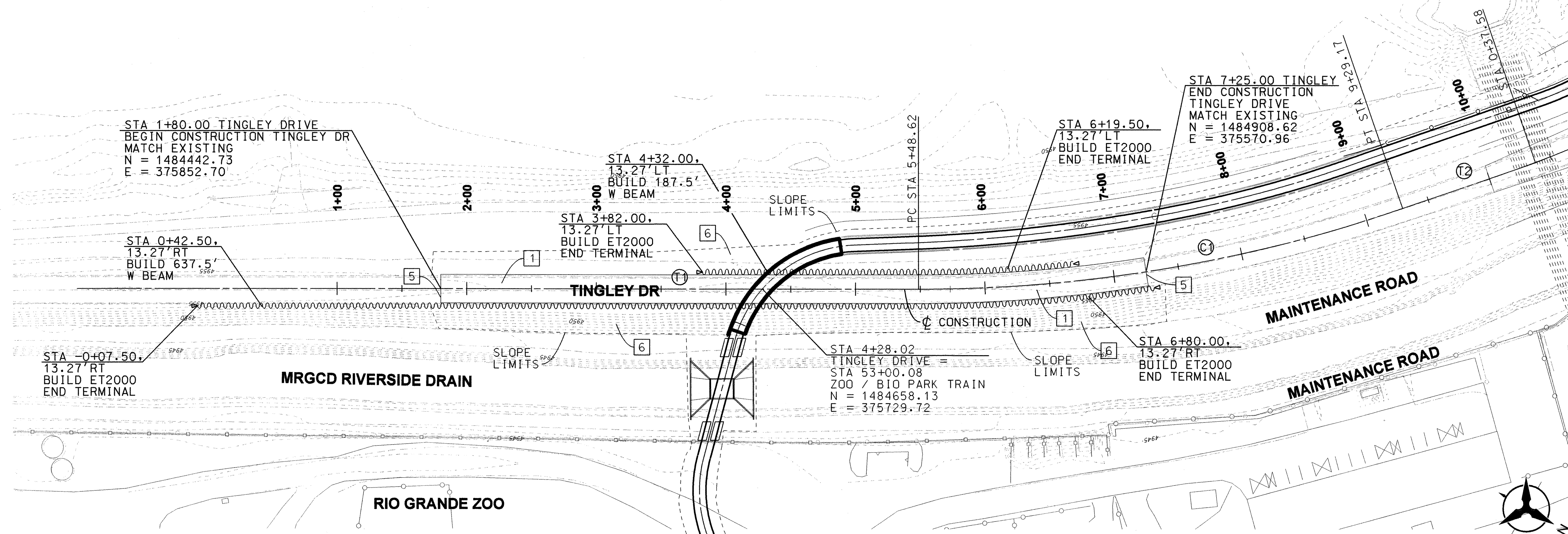
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRACK CONSTRUCTION DETAILS

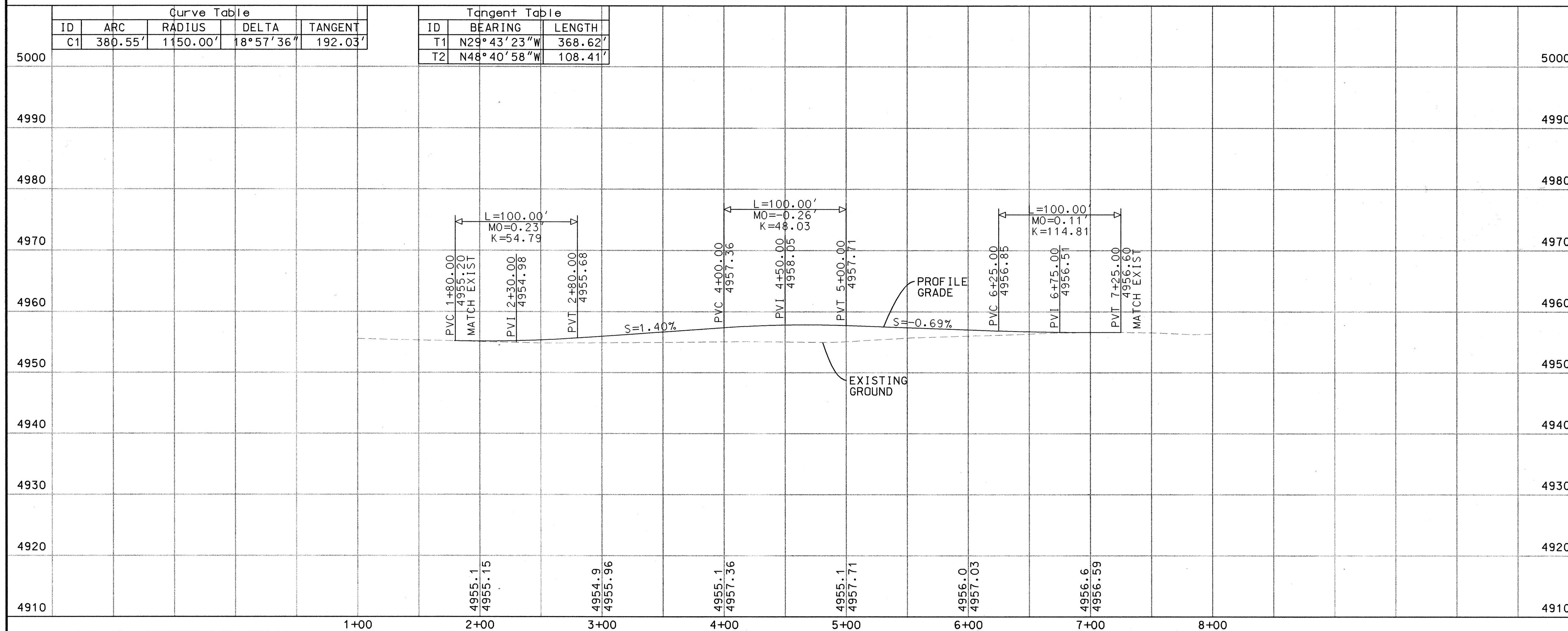
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004 DESIGN REVIEW COMMITTEE	APPROVED MAR - 9 2004 CITY ENGINEER		
LAST DESIGN UPDATE			

CITY PROJECT NO.	701192	ZONE MAP NO.	J-12, J-13, K-13	SHEET	10	OF	33
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SCANNED BY
MESA REPRO



TINGLEY DRIVE



KEYED NOTES

- 1 REMOVE EXISTING PAVEMENT
- 2 EXISTING FENCE TO REMAIN
- 3 REMOVE EXISTING ASPHALT TRAIL
- 4 ADJUST LEVEE TOE DRAIN RISER TO GRADE (BY OTHERS)
- 5 SAWCUT EXISTING PAVEMENT
- 6 NATIVE GRASS SEEDING PER SECTION 1012

NOTES

1. CONSTRUCT METAL BARRIER & END ANCHORS PER COA STD DWGS 2610, 2615, 2620, 2625, 2626, & 2631.

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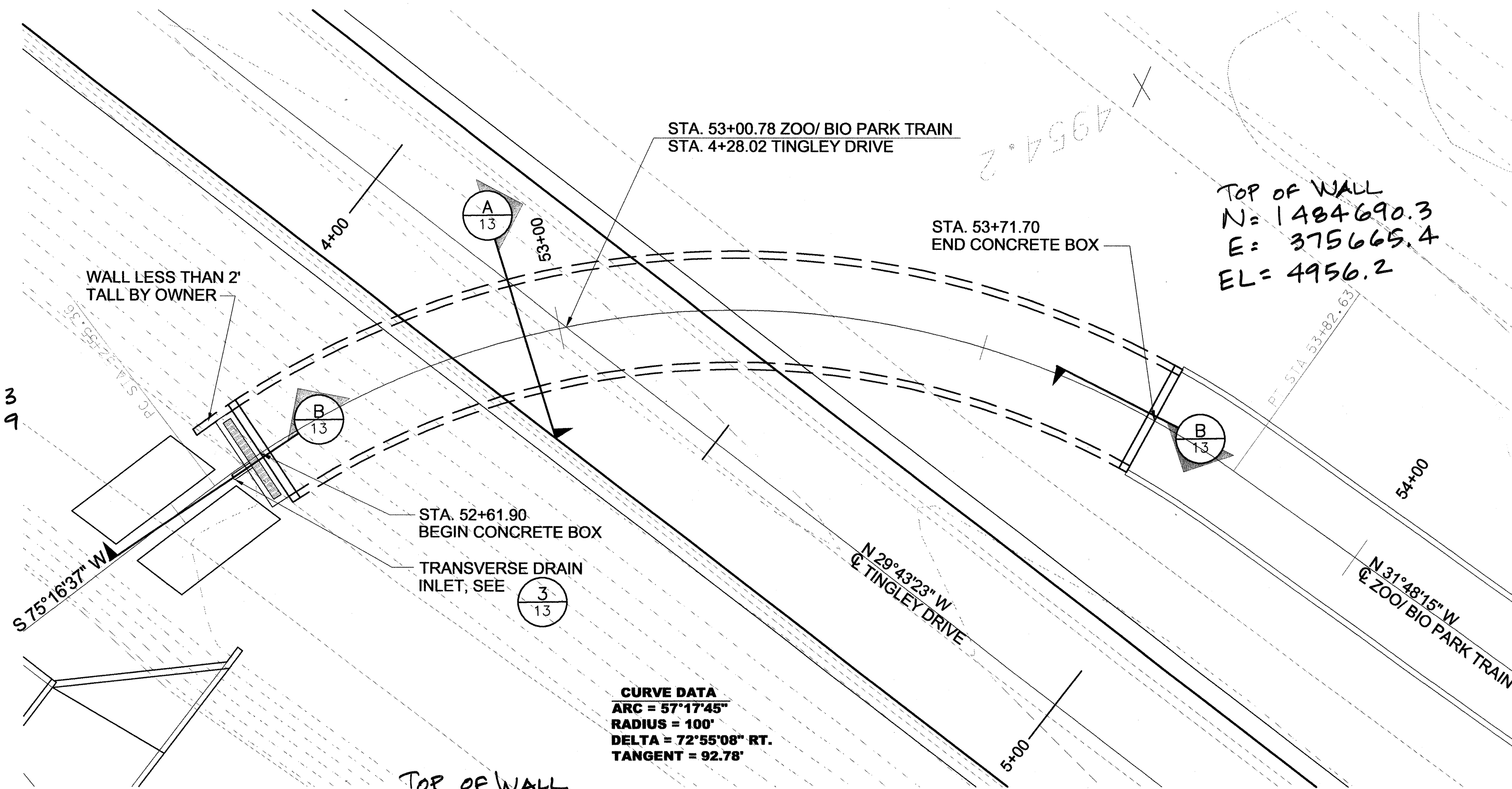
ZOO / BIO PARK TRAIN
TINGLEY DRIVE PLAN & PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	

CITY PROJECT NO. 701192 ZONE MAP NO. J-12, J-13, K-13 SHEET 61 OF 33

RECORD DRAWING

TOP OF WALL
N = 1484664.3
E = 375764.9
EL = 4955.7



TOP OF WALL
N = 1484651.0
E = 375768.3
EL = 4955.8

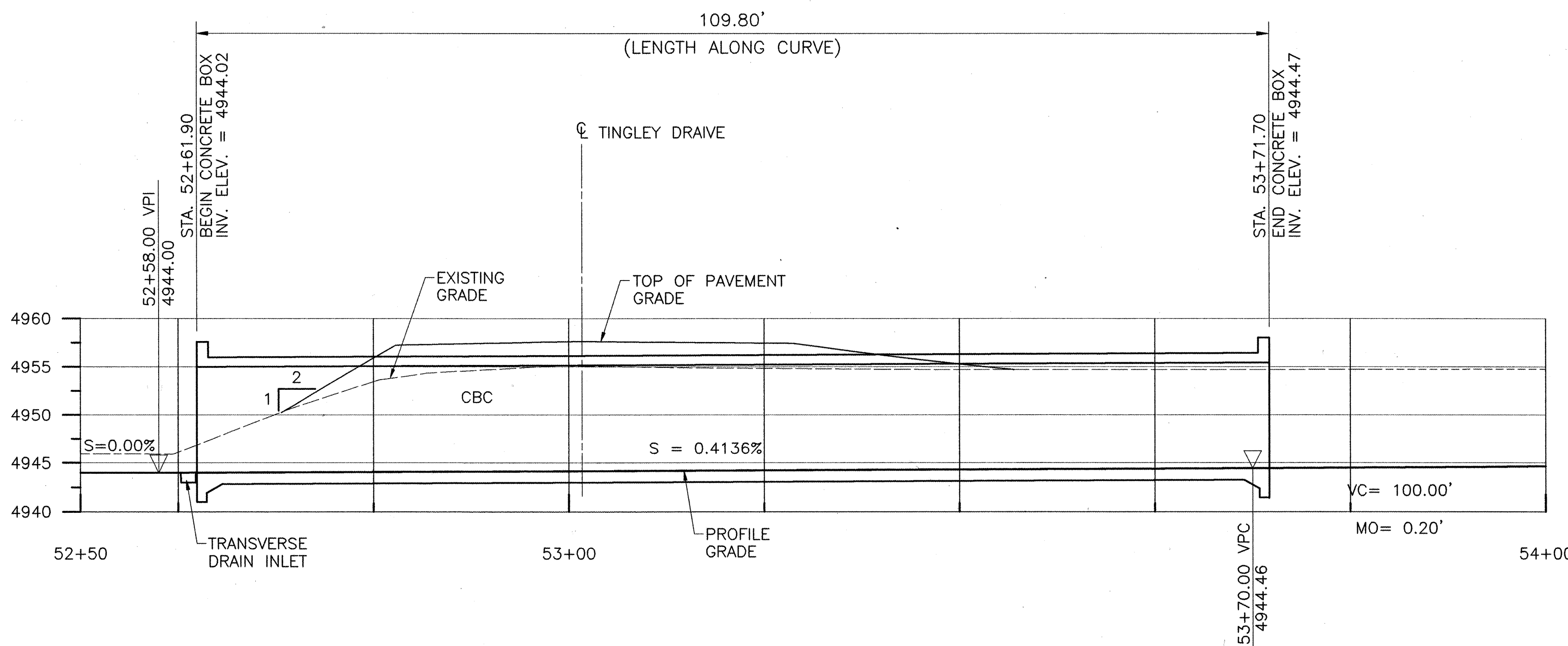
CURVE DATA
ARC = 57°17'45"
RADIUS = 100'
DELTA = 72°55'08" RT.
TANGENT = 92.78'

TOP OF WALL
N = 1484690.3
E = 375665.4
EL = 4956.2

TOP OF WALL
N = 1484698.6
E = 375675.9
EL = 4956.2

ZOO/BIO PARK TRAIN CROSSING CAST-IN-PLACE LOCATION PLAN

SCALE: 1" = 10'-0"



CAST-IN-PLACE CONCRETE BOX PROFILE

SCALE: 1" = 10'-0"

GENERAL STRUCTURAL NOTES

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. STRUCTURAL CAST-IN-PLACE CONCRETE: STRUCTURAL CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 101, TABLE 101C FOR HYDRAULIC STRUCTURES.
3. REINFORCING STEEL: STEEL REINFORCEMENT AND PLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 102, STEEL REINFORCEMENT AND SHALL BE GRADE 60. ALL LAP SPLICES SHALL BE CLASS B OR AS SHOWN ON THE PLANS.
4. SUBGRADE PREPARATION: DEWATERING IS TO BE PERFORMED TO A SUFFICIENT DEPTH TO ALLOW COMPACTION WITHOUT CAUSING WATER TO RISE INTO SUBGRADE. EXCAVATE TO SUBGRADE, REMOVE ALL ORGANIC AND COHESIVE MATERIAL AND REPLACE WITH FREE DRAINING GRANULAR MATERIAL. COMPACT SUBGRADE UNTIL STABLE USING STATIC COMPACTOR. COMPACTION SHALL EXTEND HORIZONTALLY BEYOND CBC A MINIMUM OF 2 FEET AND TO OUTSIDE DIAMETER OF RCP.
5. BACKFILL: BACKFILL SHALL BE PLACED IN LIFTS NO GREATER THAN 6 INCHES, MOISTURE CONDITIONED TO OPTIMUM MOISTURE CONTENT ($\pm 2\%$) AND COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. HEAVY EQUIPMENT USED FOR COMPACTION EFFORTS ABOVE CBC AND RCP SHALL NOT BE USED UNTIL A MINIMUM OF 3 FEET OF COMPACTED SOIL LIES ABOVE TOP OF STRUCTURE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING FOR ALL PARTS OF THE STRUCTURE AND ANY ADJACENT STRUCTURES DURING CONSTRUCTION, AS WELL AS WORKER SAFETY AND COMPLIANCE WITH OSHA OR OTHER AGENCY SAFETY GUIDELINES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CODE ADMINISTRATION APPROVAL AND FEES ASSOCIATED WITH IT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THAT ALL REINFORCEMENT IS PROPERLY ALIGNED AND TIED IN PLACE BEFORE PLACING CONCRETE. ALL STEEL SHALL BE ACCURATELY LOCATED AND SECURED IN PLACE SO THAT IT REMAINS IN POSITION DURING THE PLACEMENT OF THE CONCRETE AT NO ADDITIONAL COST TO THE OWNER.

DESIGN LOADS

EFP (ACTIVE)	=	35 PCF
EFP (SATURATED)	=	82 PCF
EFP (PASSIVE)	=	325 PCF
SOIL UNIT WEIGHT	=	98 PCF
ALLOWABLE BEARING PRESSURE	=	1500 PSF
COEFFICIENT OF FRICTION FOR SLIDING	=	.4
LIVE LOAD	=	HS20-44

DEWATERING AND SUBGRADE PREPARATORY NOTES:

- A. MRGCD CBC STRUCTURE
 1. SUBGRADE PREPARATION: DEWATERING IS TO BE PERFORMED TO A SUFFICIENT DEPTH TO ALLOW COMPACTION WITHOUT CAUSING WATER TO RISE INTO SUBGRADE. EXCAVATE TO SUBGRADE, REMOVE ALL ORGANIC AND COHESIVE MATERIAL, AND REPLACE WITH FREE DRAINING GRANULAR MATERIAL. COMPACT SUBGRADE UNTIL STABLE USING STATIC COMPACTOR. COMPACTION SHALL EXTEND HORIZONTALLY BEYOND CBC A MINIMUM OF 2 FEET.
- B. TRAIN CROSSING CAST-IN-PLACE STRUCTURE
 1. EXCAVATE TO SUBGRADE AND REMOVE ANY CLAY OR ORGANIC MATERIAL TO ALLOW VIBRATORY COMPACTION OF CBC SUBGRADE WITHOUT CAUSING WATER TO RISE WITHIN 5 FEET OF SUBGRADE. SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D-1557. COMPACTION SHOULD BE ACHIEVED WITH A MINIMUM OF 20 PASSES OF A VIBRATORY COMPACTOR. COMPACTION SHALL EXTEND HORIZONTALLY BEYOND CBC A MINIMUM OF 5 FEET. DEWATERING MAY BE DISCONTINUED ONCE THE REQUIRED COMPACTION IS ACHIEVED AND WATER DOES NOT RISE TO THE SUBGRADE LEVEL. THE SLAB MAY BE CAST ON COMPACTED SUBGRADE AS LONG AS THE WATER SURFACE ELEVATION IS NOT AT SUBGRADE.
- C. TRAIN MSE WALL
 1. SUBGRADE PREPARATION FOR THE MSE WALLS NORTH OF THE TINGLEY CROSSING SHALL CONSIST OF: EXCAVATION TO SUBGRADE; REMOVAL OF ANY CLAY OR ORGANIC MATERIAL ENCOUNTERED; REPLACEMENT OF REMOVED MATERIAL WITH CLEAN, COURSE SAND. DEWATERING IS NOT REQUIRED IF COMPACTION NOTED BELOW IS ACHIEVED. DENSIFY THE SUBGRADE WITH A VIBRATOR COMPACTOR TO ACHIEVE 95% COMPACTION AT SUBGRADE. IF VIBRATORY COMPACTION CAUSES GROUND WATER TO RISE INTO THE SUBGRADE, ALLOW THE WATER TO RETURN TO EQUILIBRIUM. CONSTRUCTION OF THE STRUCTURE MAY PROCEED AS LONG AS WATER IS NOT AT SUBGRADE.

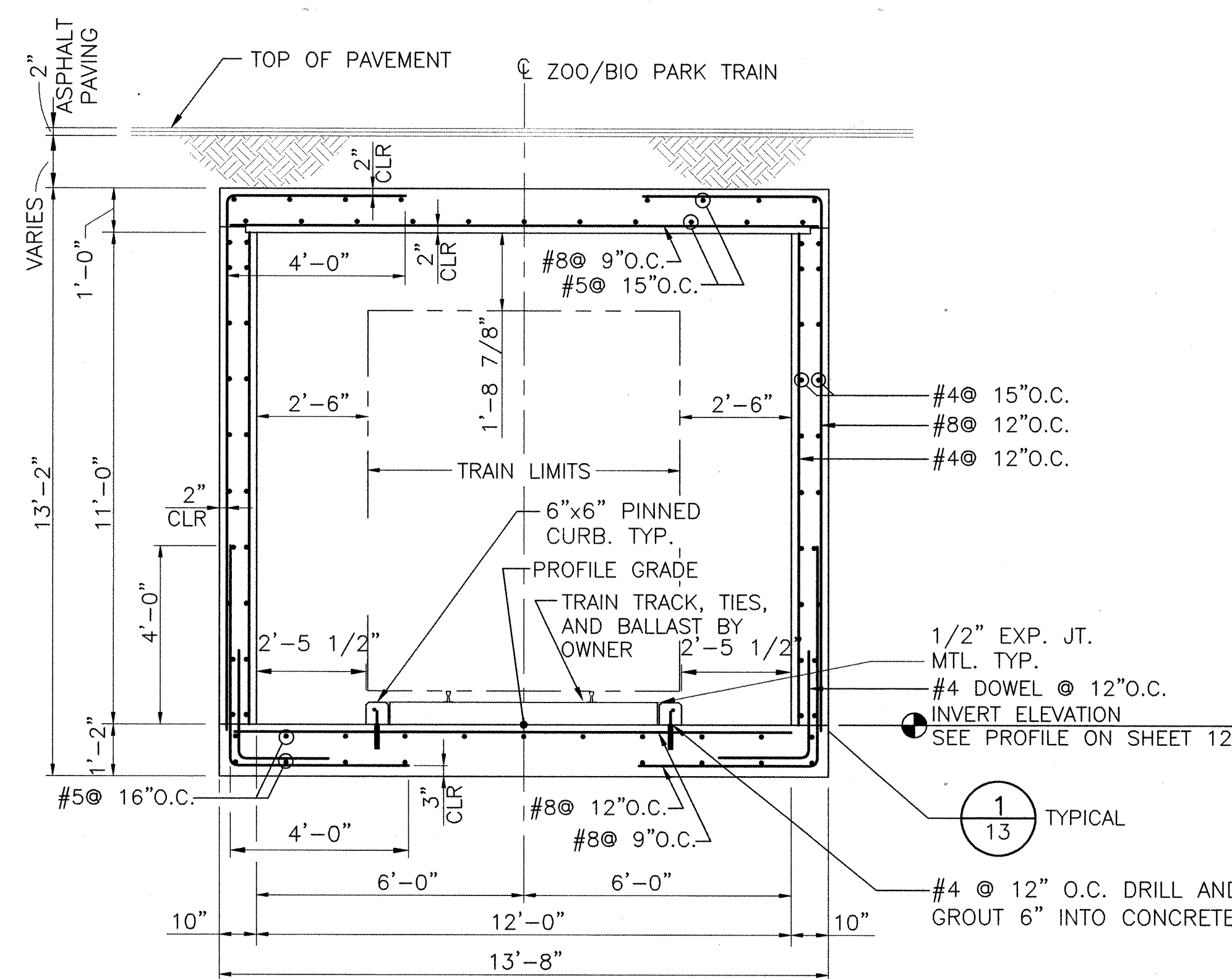
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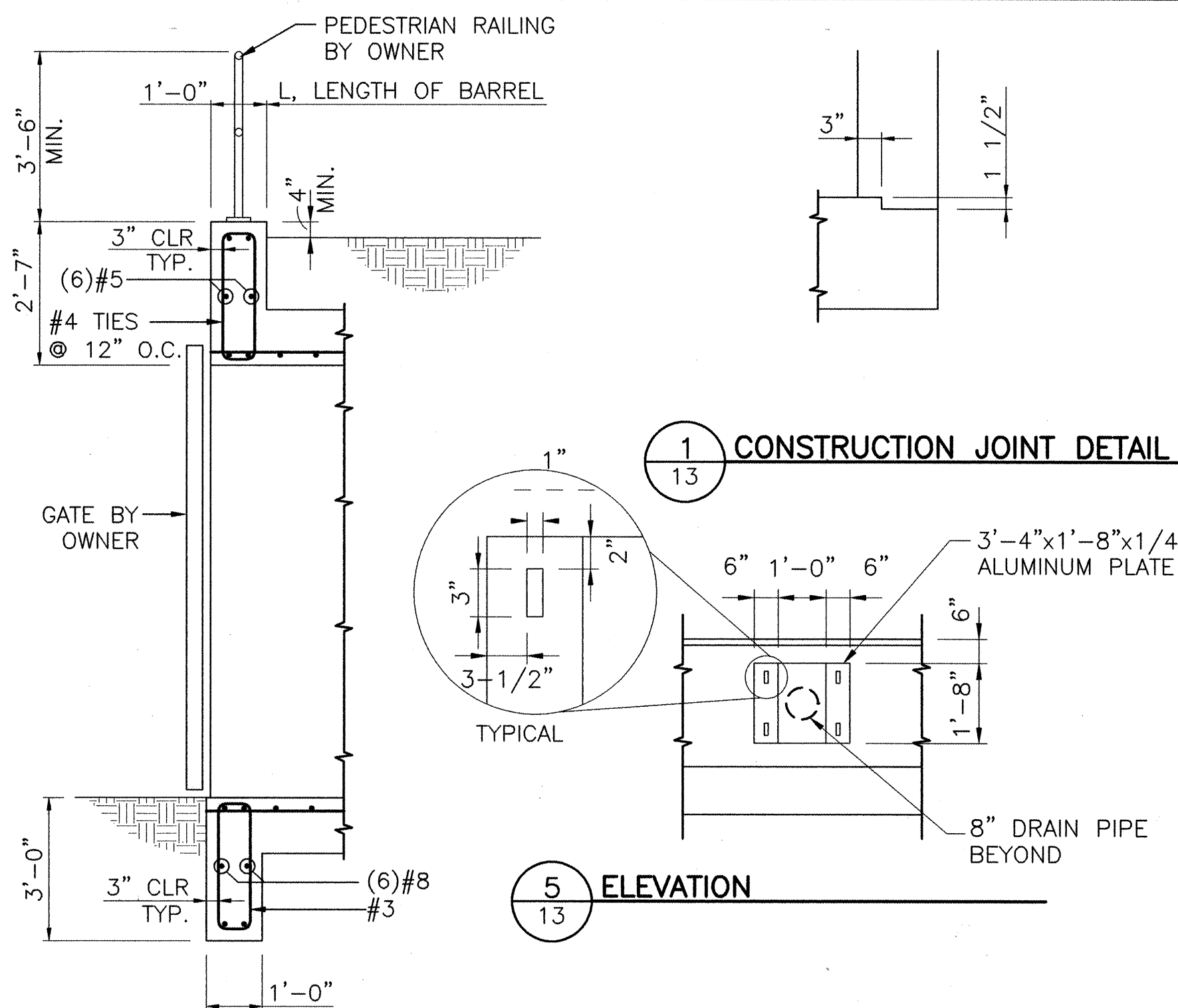
ZOO / BIO PARK TRAIN
 TRAIN CROSSING CAST-IN-PLACE STRUCTURE PLAN AND PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO. 7 DAY YR.	MO. 7 DAY YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
6978.01	J-12, J-13, J-14	12	33

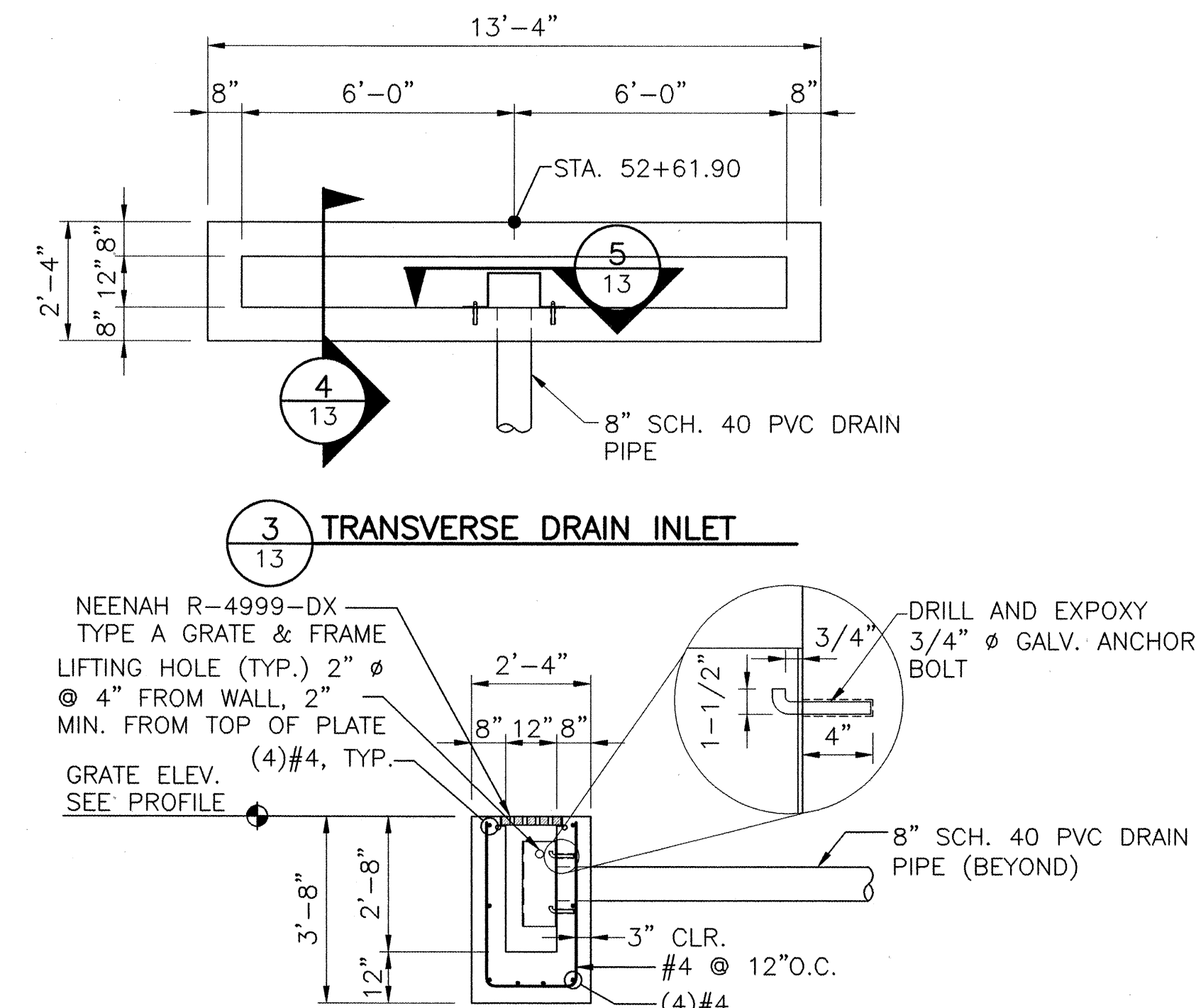
DESIGNED BY: JPL
 DRAWN BY: MAG
 CHECKED BY: DMB



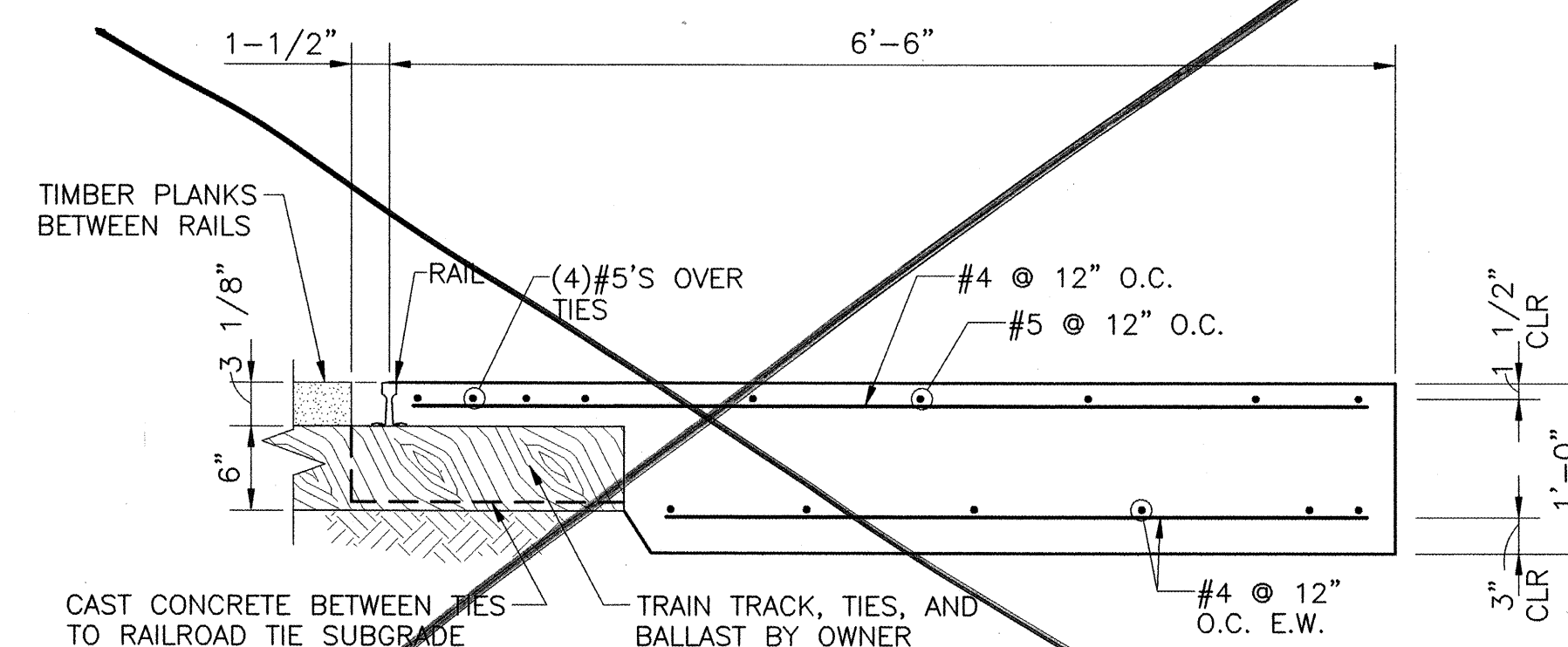
A SECTION THROUGH C.I.P. BOX CULVERT
13 STA. 52.61.90 TO STA. 53.71.70



B PARAPET AND CUTOFF WALL SECTION
13

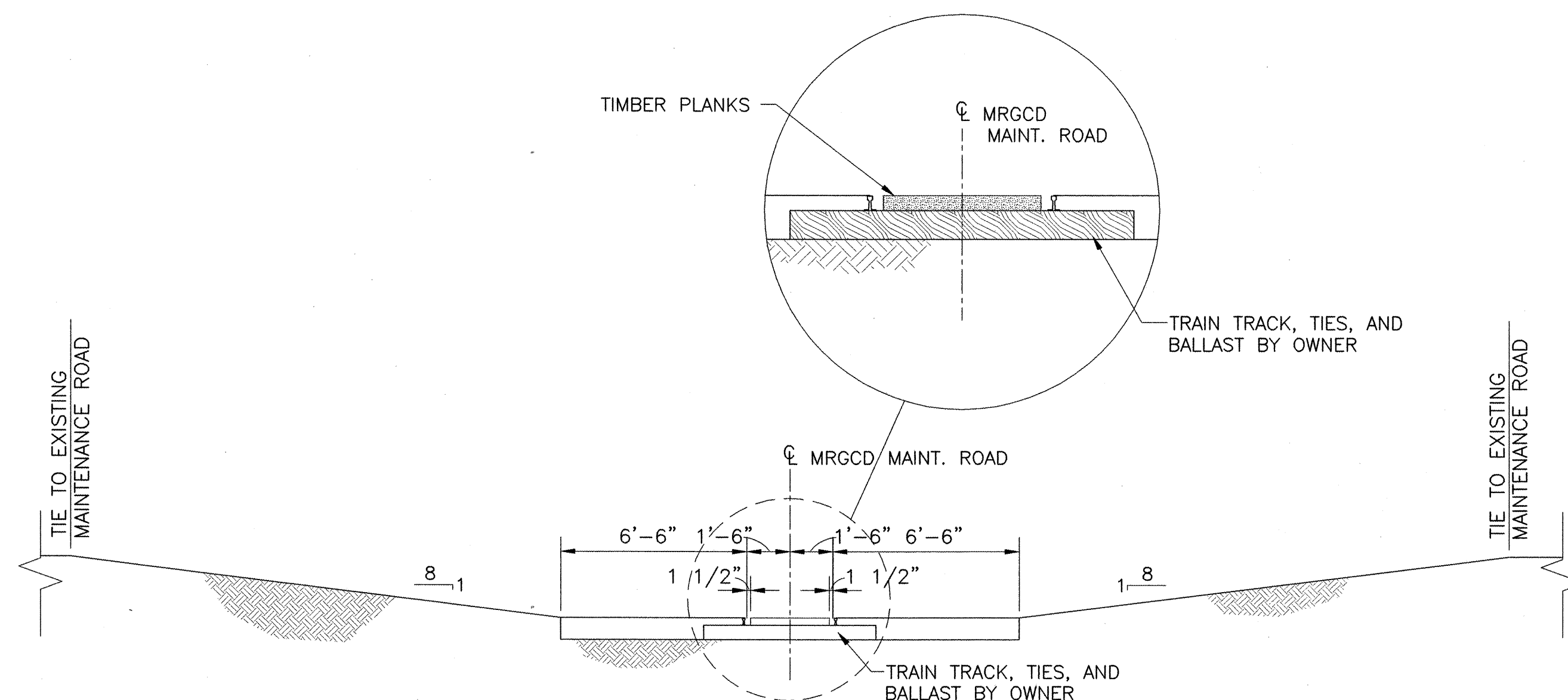


3 TRANSVERSE DRAIN INLET
13

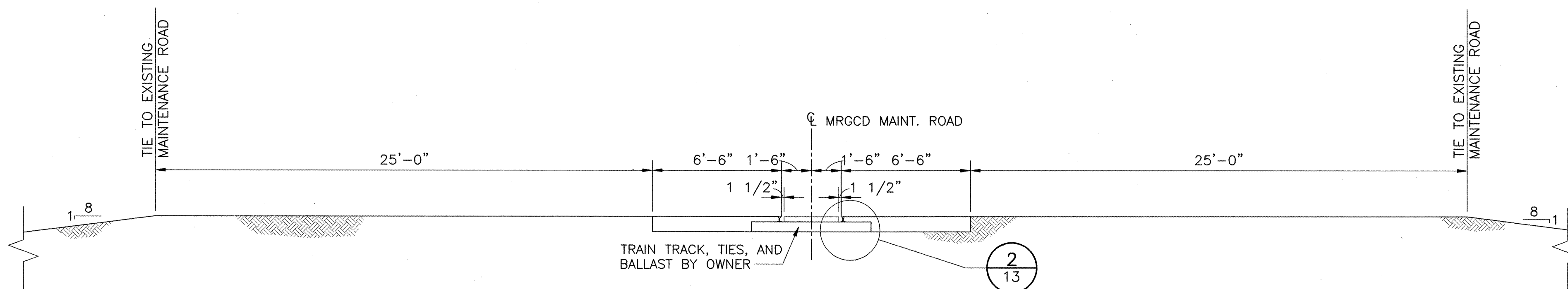


2 APPROACH SLAB DETAIL
13 NO SCALE

NOT CONSTRUCTED



C MRGCD MAINTENANCE ROAD PROFILE
13 NO SCALE



D MRGCD MAINTENANCE ROAD PROFILE
13 NO SCALE

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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN			
TRAIN CROSSING CAST-IN-PLACE STRUCTURE AND SECTIONS			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
6978.01	J-12, J-13, J-14	13	33

RECORD DRAWING

SCANNED BY
MESA REPRO



SCALE: 1" = 10'-0"

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ENGINEERING **SPATIAL DATA** **ADVANCED TECHNOLOGIES**

 CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
MRGCD RIVERSIDE DRAIN
CBC STRUCTURE PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004 DESIGN REVIEW COMMITTEE	APPROVED MAR - 9 2004 CITY ENGINEER	LAST DESIGN UPDATE	

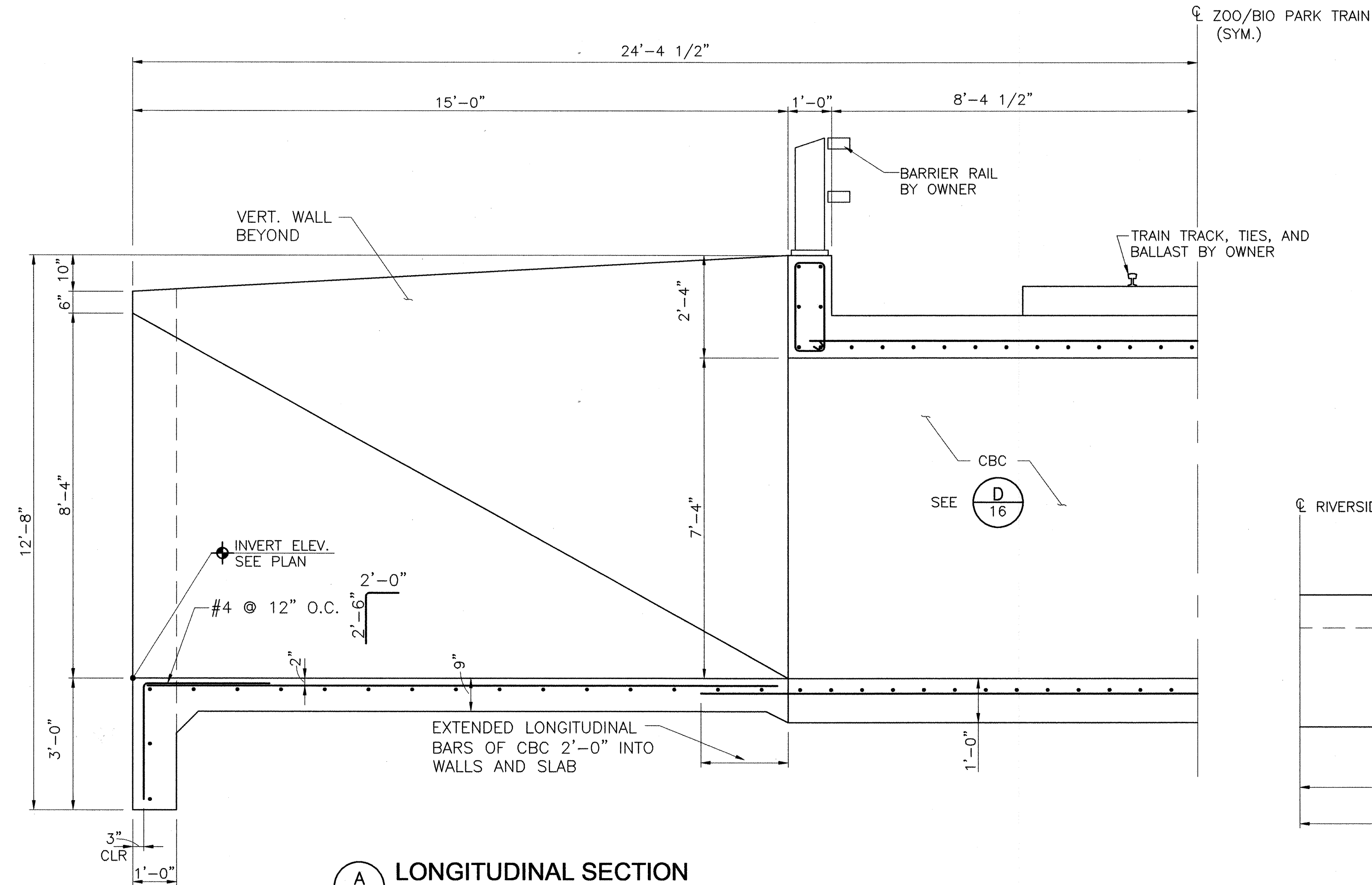
CITY PROJECT NO.	6978.01	ZONE MAP NO. J-12, J-13, J-14	SHEET 14	OF 33 28
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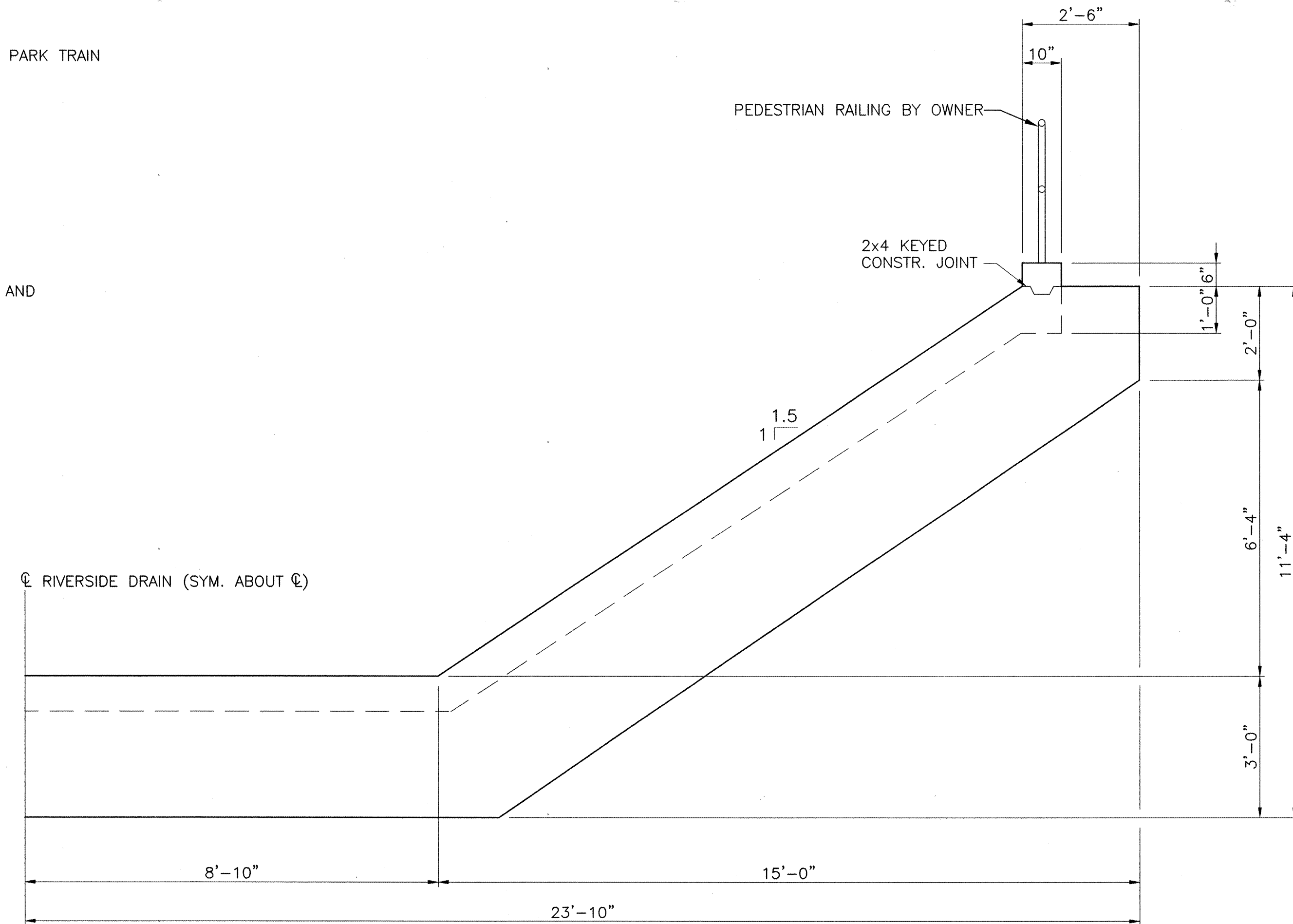
BHI JOB NO. 040133

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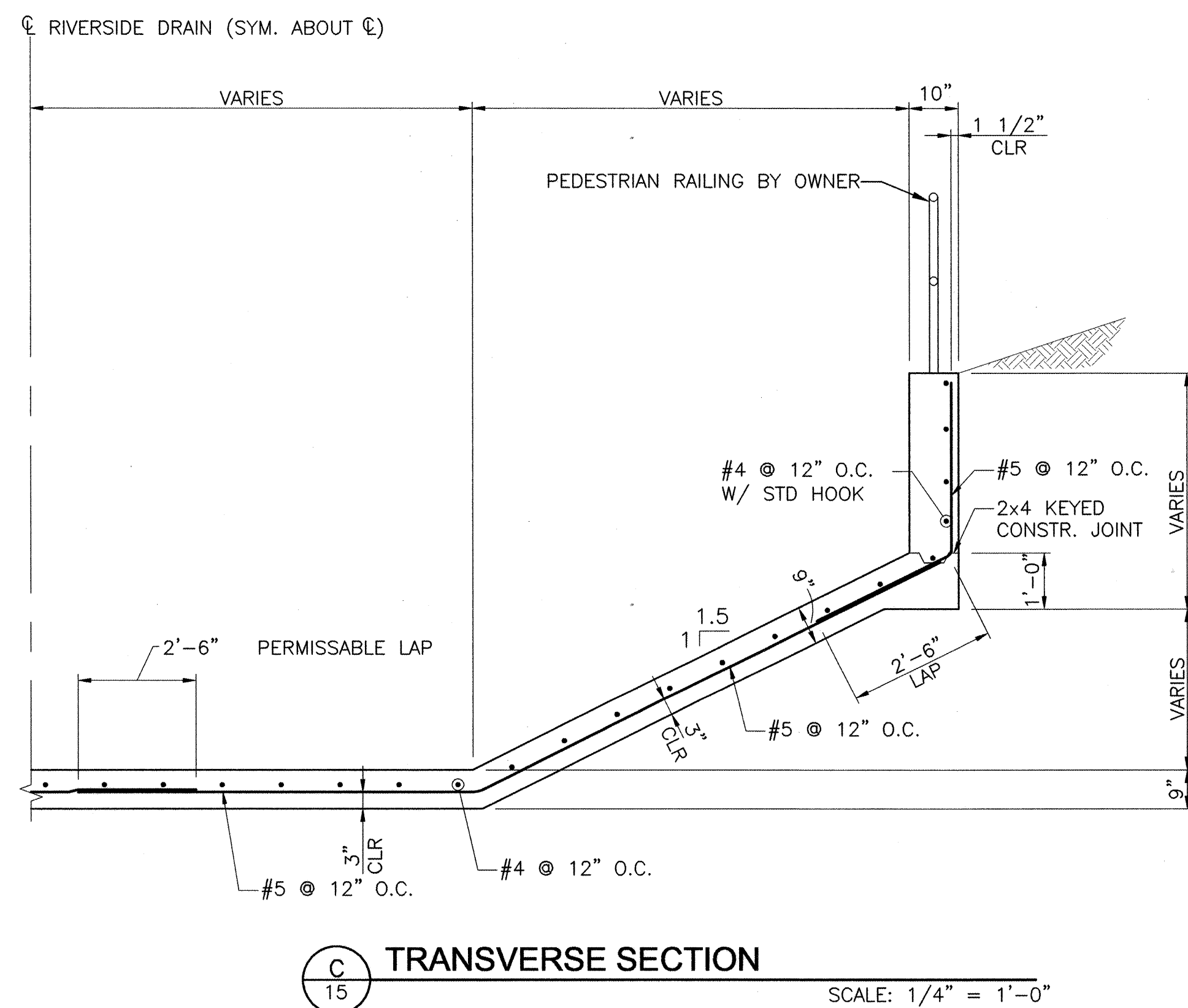
SCANNED BY
MESA REPRO



A
15
LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"



B
15
ELEVATION @ CUTOFF WALL
SCALE: 1/2" = 1'-0"



C
15
TRANSVERSE SECTION
SCALE: 1/4" = 1'-0"

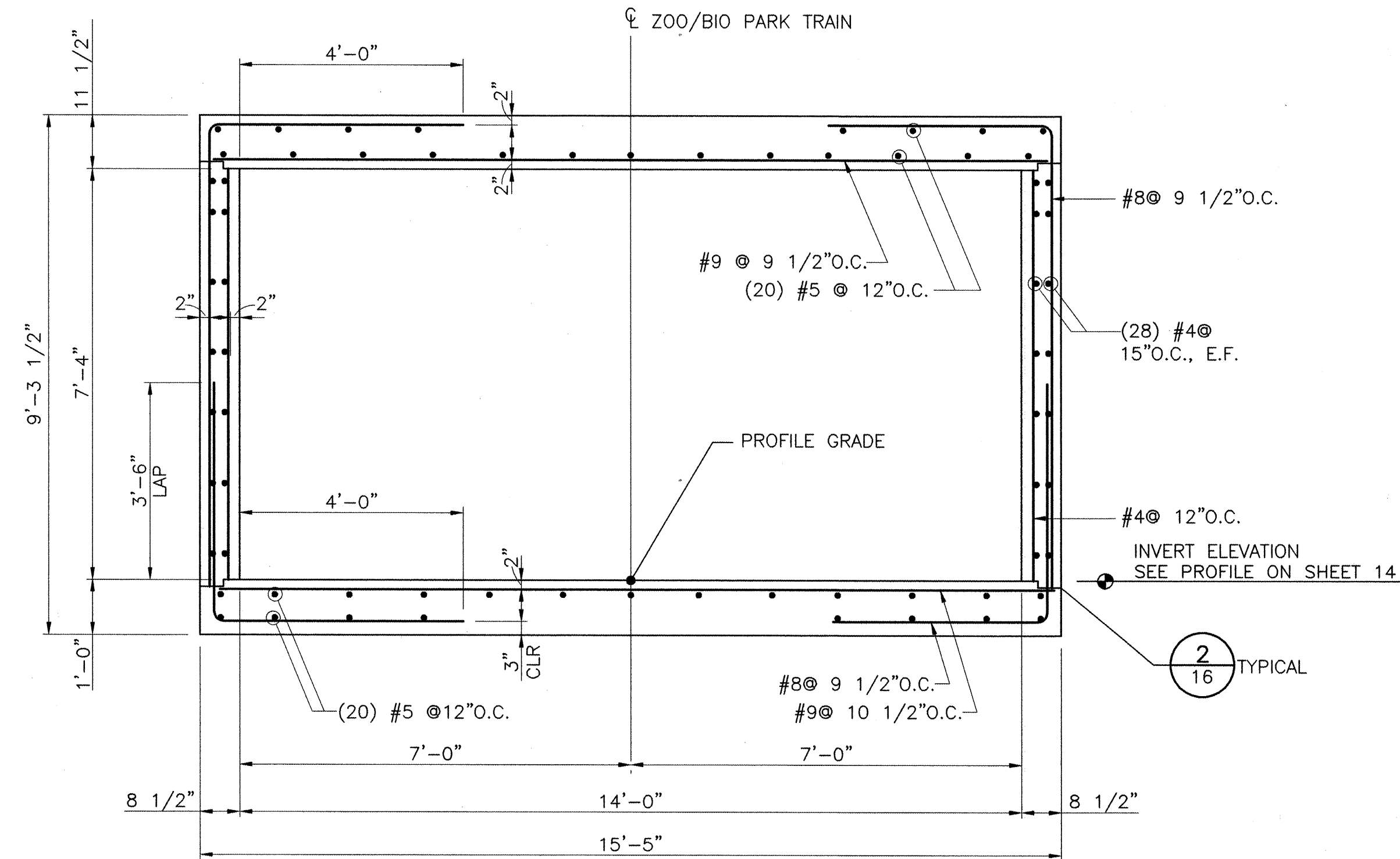
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BHI JOB NO. 040133

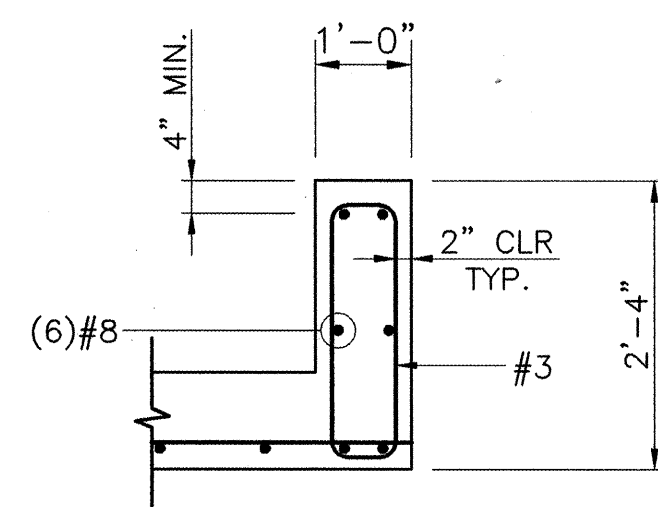
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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
ZOO / BIO PARK TRAIN TRAIN CROSSING CBC STRUCTURE SECTIONS	
DESIGN REVIEW COMMITTEE APPROVED MAR - 9 2004	CITY ENGINEER APPROVAL APPROVED MAR - 9 2004
CITY PROJECT NO. 6978.01	ZONE MAP NO. J-12, J-13, J-14
SHEET 15	OF 33

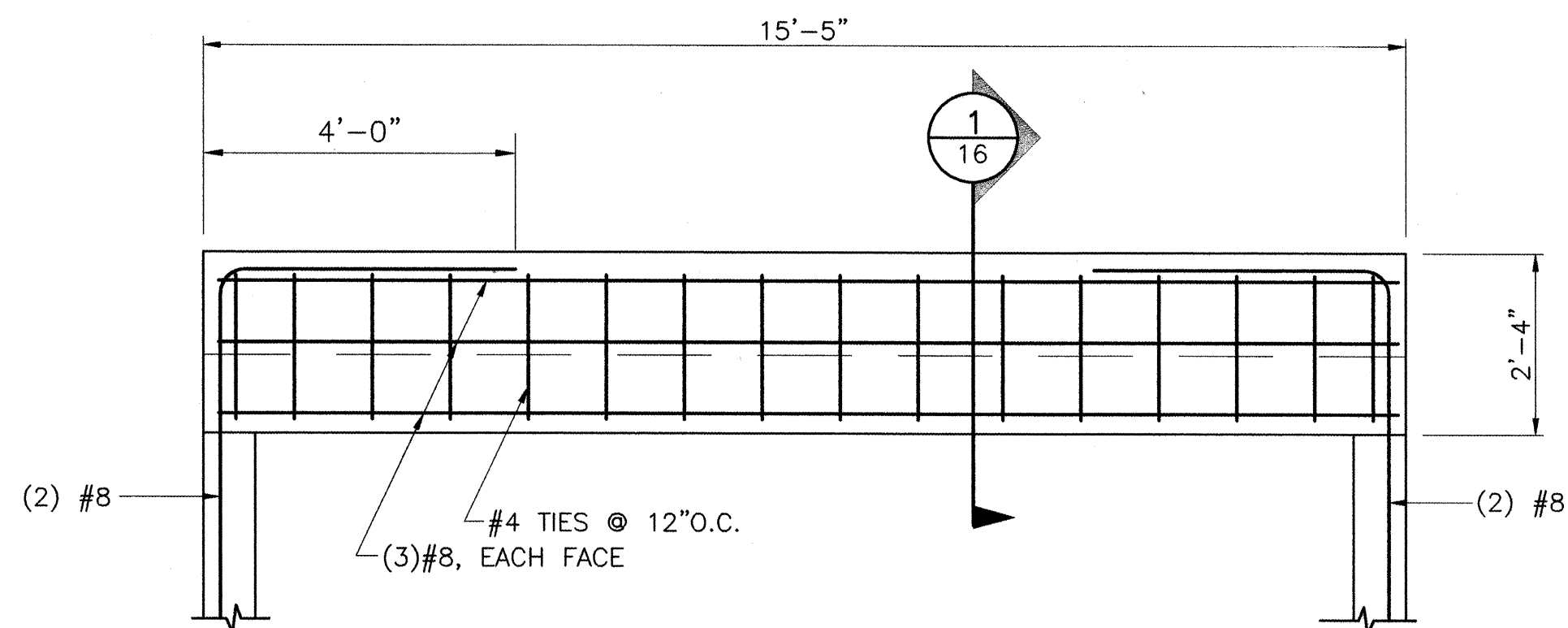
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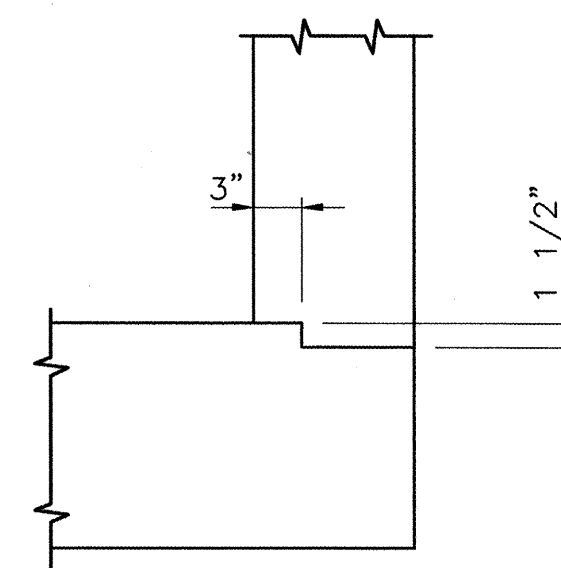
A
16
CBC TRANSVERSE SECTION
SCALE: 1/2" = 1'-0"



1
16
PARAPET SECTION
SCALE: 1/2" = 1'-0"



CBC PARAPET ELEVATION
SCALE: 1/2" = 1'-0"



2
16
CONSTRUCTION JOINT DETAIL
SCALE: 1/2" = 1'-0"

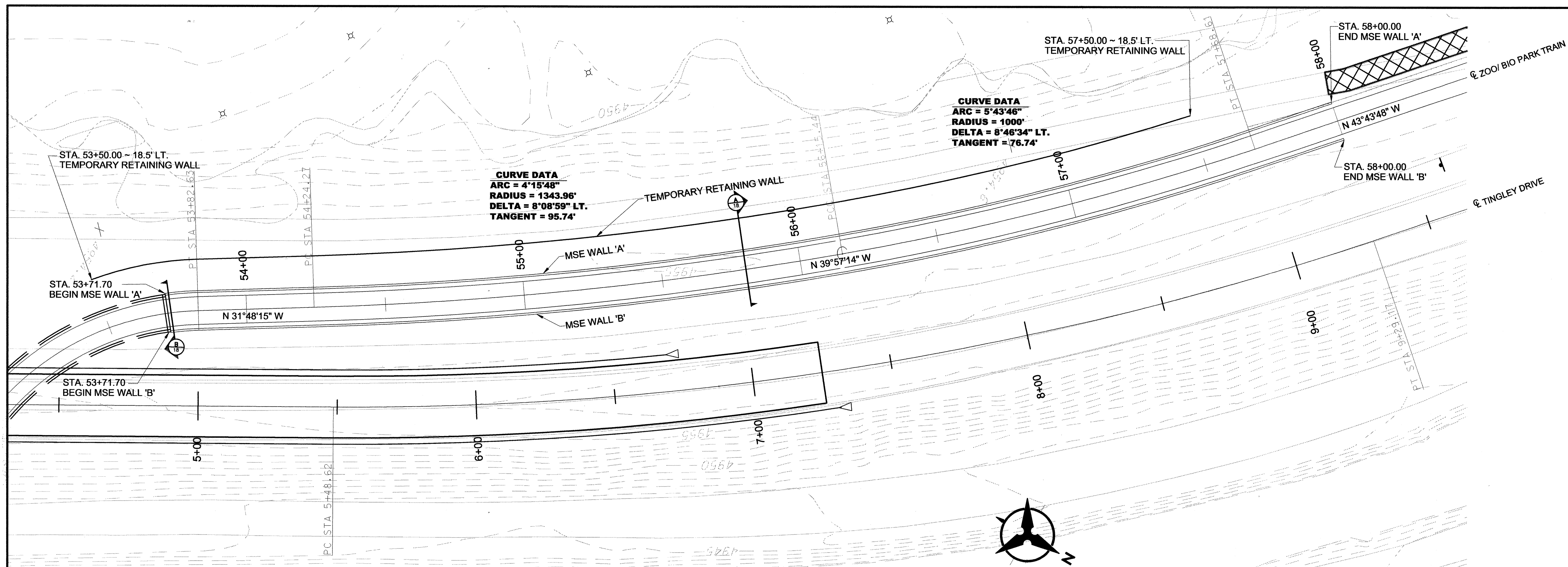
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PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRAIN CROSSING
CBC STRUCTURE SECTIONS

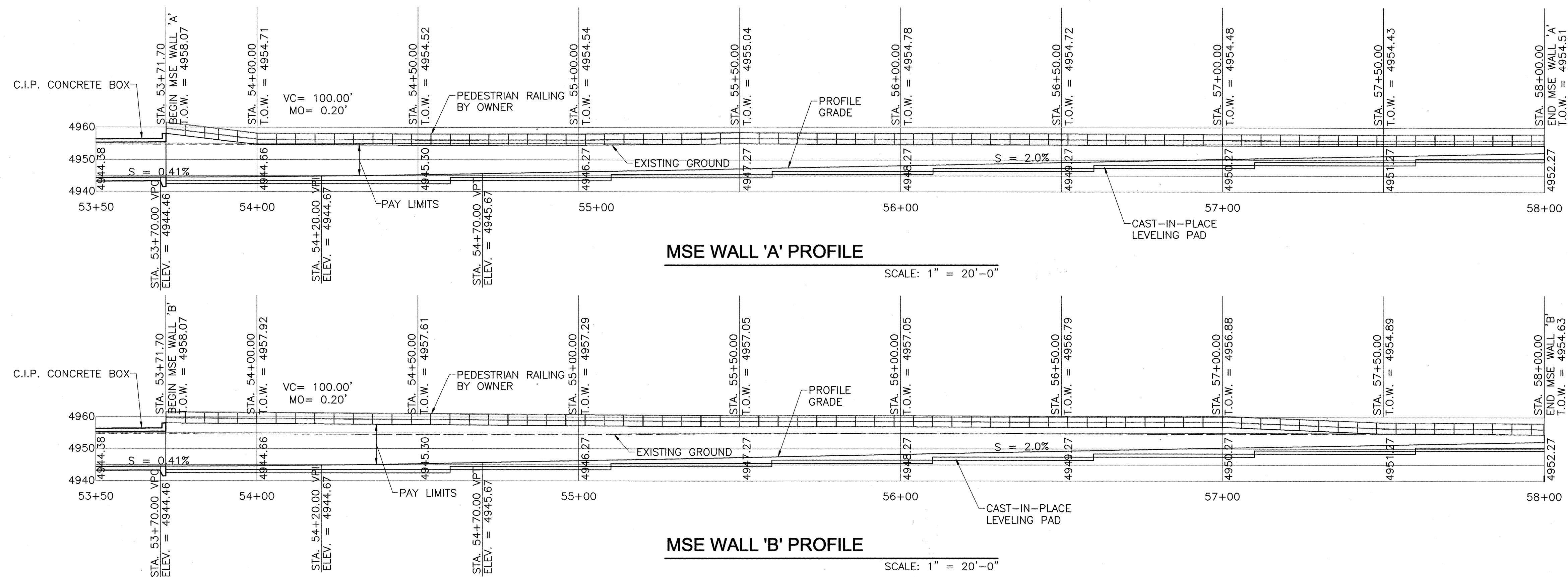
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APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
6978.01	J-12, J-13, J-14	16	33

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
	NO. DATE BY REMARKS REVISIONS DESIGN	FIELD NOTES DATE BY REMARKS		ACS BRASS TABLE STAMPED "14-112" ON CENTRAL AVE. 29.5' NE OF EXISTING EXPANSION JOINT ON THE RIO GRANDE BRIDGE.		CONTRACTOR AS. Horner, Inc. STAKED BY AS. Horner, Inc. INSPECTED BY AS. Horner, Inc. FIELD VERIFICATION BY AS. Horner, Inc. CORRECTED BY AS. Horner, Inc.	
		STATE PLANE COORDINATES (CENTRAL ZONE, NAD27) N=1488959.78 E=371837.70 (GROUND) GROUND TO GRID FACTOR = 0.99968083 ELEVATION = 4962.83 (NGVD 29)		MICRO-FILM INFORMATION RECORDED BY NO. DATE		MICRO-FILM INFORMATION RECORDED BY NO. DATE	
		DESIGNED BY JPL DRAWN BY MAG CHECKED BY DMG		DATE 01/2004 DATE 01/2004 DATE 01/2004		DATE 01/2004 DATE 01/2004 DATE 01/2004	



ZOO/ BIO PARK TRAIN MSE WALL LAYOUT PLAN

SCALE: 1" = 20'-0"



TEMPORARY RETAINING WALL NOTES

1. A TEMPORARY RETAINING WALL SYSTEM IS REQUIRED AS SHOWN ON THE PLANS FOR TEMPORARY SHORING BETWEEN MSE WALL REINFORCING AND EXISTING LEVY. THE CONTRACTOR SHALL SELECT, DESIGN AND CONSTRUCT A RETAINING WALL SYSTEM AT THE LOCATION SHOWN. THE TEMPORARY WALL IS TO BE DESIGNED AND DETAILED BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY AND PERFORMANCE OF THE TEMPORARY RETAINING WALL. THE CONTRACTOR SHALL NOT UNDERMINE OR OTHERWISE DISTURB THE FILL AT THE EXISTING ROADWAY DURING CONSTRUCTION OF THE TEMPORARY RETAINING WALL SYSTEM.
2. ACCEPTABLE WALL TYPES MAY BE BUT ARE NOT RESTRICTED TO SOIL NAILING, TIE-BACK WALLS OR GRAVITY WALLS. WIRE-FACE MSE WALLS EXCLUDED.
3. WALL DESIGN PARAMETERS:
EFP (ACTIVE) = 38 PSF
EFP (PASSIVE) = 325 PSF
SOIL UNIT WEIGHT = 98 PCF
ALLOWABLE SOIL BEARING = 1500 PSF
SOIL SUBGRADE REACTION = 200 PCI
SOIL FRICTION COEFFICIENT = 0.40

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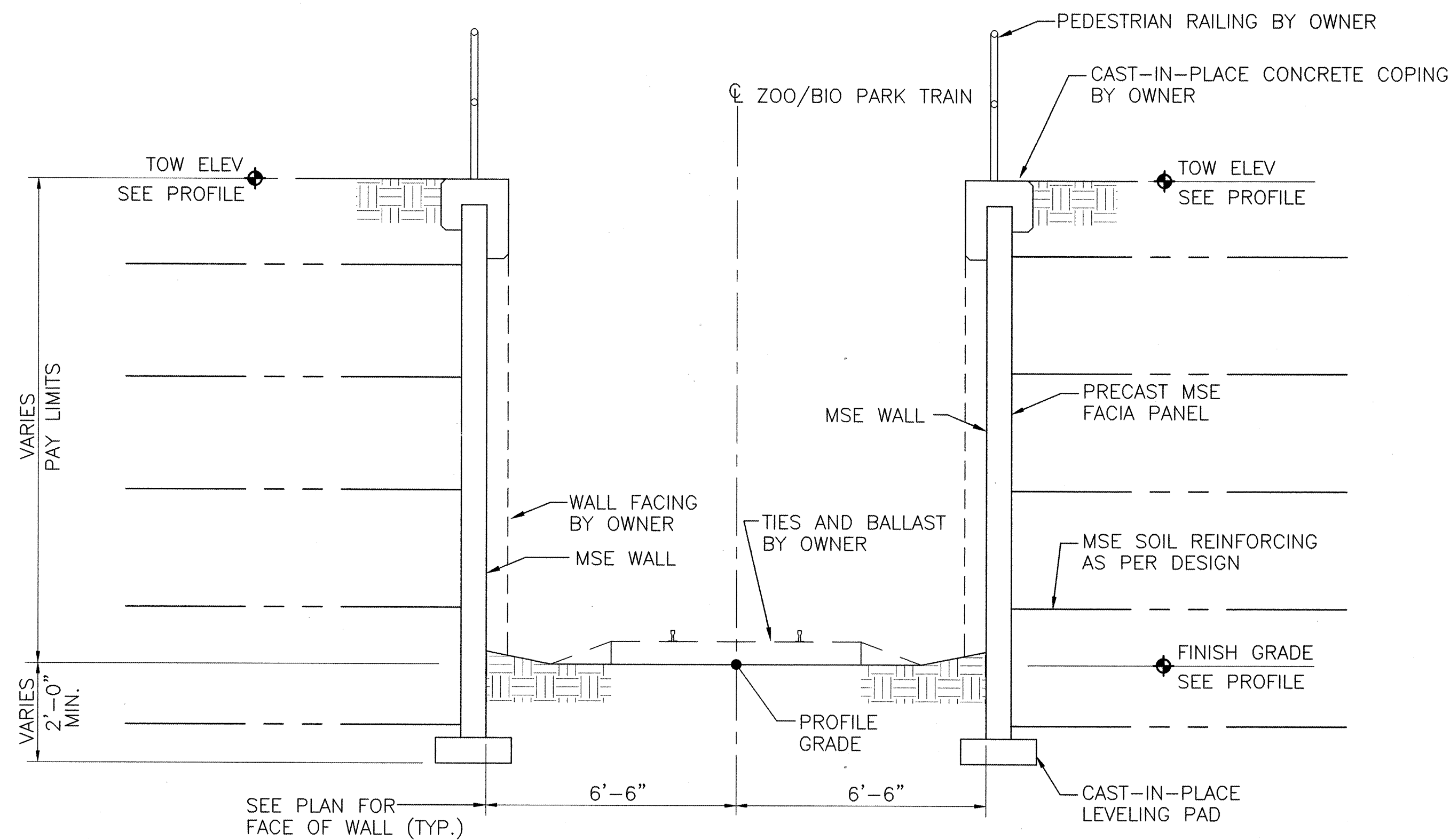
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

ZOO / BIO PARK TRAIN
TRAIN MSE WALL PLAN AND PROFILE

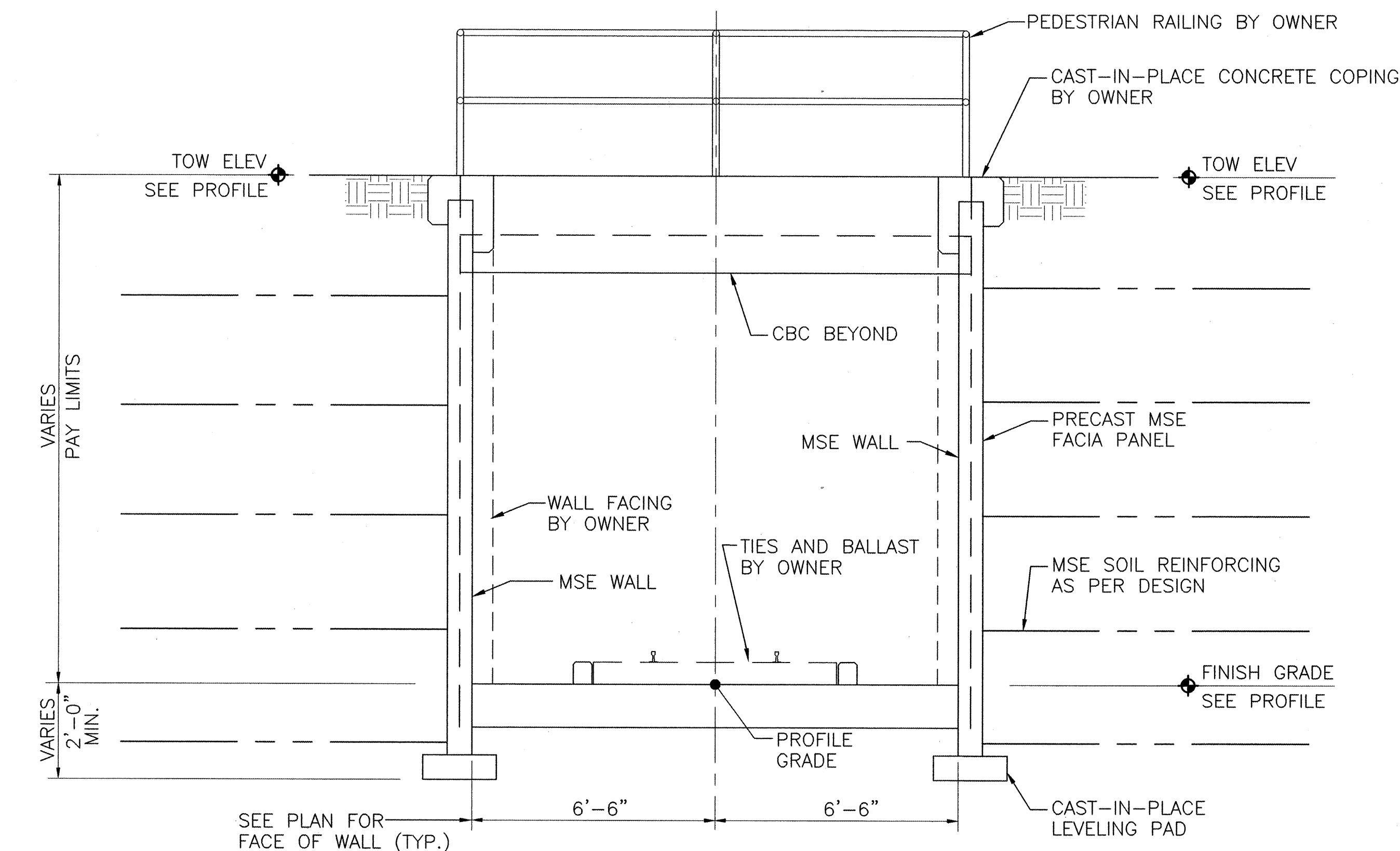
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APPROVED MAR - 9 2004 DESIGN REVIEW COMMITTEE	APPROVED MAR - 9 2004 CITY ENGINEER		
LAST DESIGN UPDATE			

CITY PROJECT NO. 6978.01 ZONE MAP NO. J-12, J-13, J-14 SHEET 17 OF 28

RECORD DRAWING



A TYPICAL SECTION
18 ZOO/ BIO PARK TRAIN
STA. 53+71.70 TO STA. 58+00.00



B SECTION @ STA.
18 ZOO/ BIO PARK TRAIN

MSE WALL NOTES

- EARTH RETAINING WALLS.** MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF STS 512 - MECHANICALLY STABILIZED EARTH RETAINING STRUCTURES. ALL PORTIONS OF THE MSE WALL WILL BE DESIGNED BY THE WALL FABRICATOR. ANY DETAILS SHOWN ARE FOR INFORMATION ONLY. CONTRACTOR SHALL SELECT EARTH RETAINING WALLS BY THE QUALIFIED PRODUCTS LIST SHOWN ON THIS SHEET.
- STRUCTURAL BACKFILL MATERIAL.** STRUCTURAL BACKFILL MATERIAL WITHIN THE REINFORCED EARTH ZONE IS INCIDENTAL TO MSE WALLS AND NO ADDITIONAL PAYMENT IS MADE THEREFOR. FOR PURPOSE OF COMPUTING EARTHWORK THE WIDTH OF THE REINFORCED EARTH ZONE IS ASSUMED TO BE EQUAL TO 0.7 TIMES THE RETAINED HEIGHT OR 8 FEET, WHICHEVER IS LARGER, AND IS NOT INCLUDED IN THE ESTIMATED ROADWAY EARTHWORK.

MSE WALL DESIGN DATA

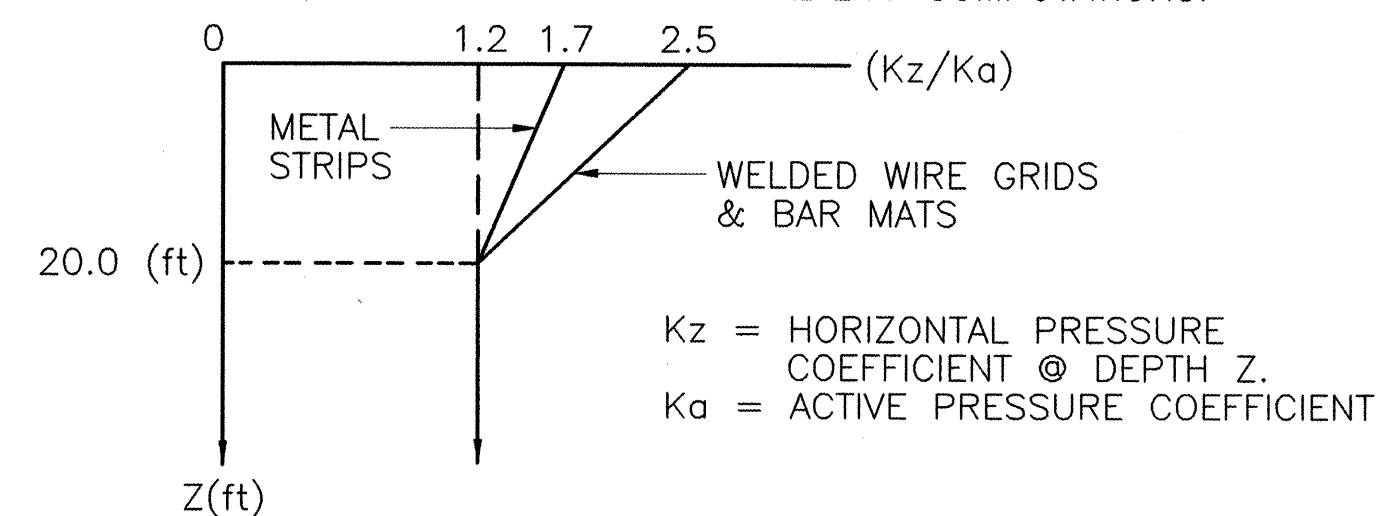
- DESIGN IN ACCORDANCE WITH AASHTO SPECIFICATIONS 1996 AND CURRENT INTERIMS.

THE MSE WALL DESIGN SHALL MEET THE FOLLOWING EXTERNAL STABILITY REQUIREMENTS:

- 1500 PSF MAXIMUM ALLOWABLE BEARING PRESSURE AT WALLS.
- THE COEFFICIENT OF SLIDING ON FOUNDATION SOIL SHALL BE 0.40.

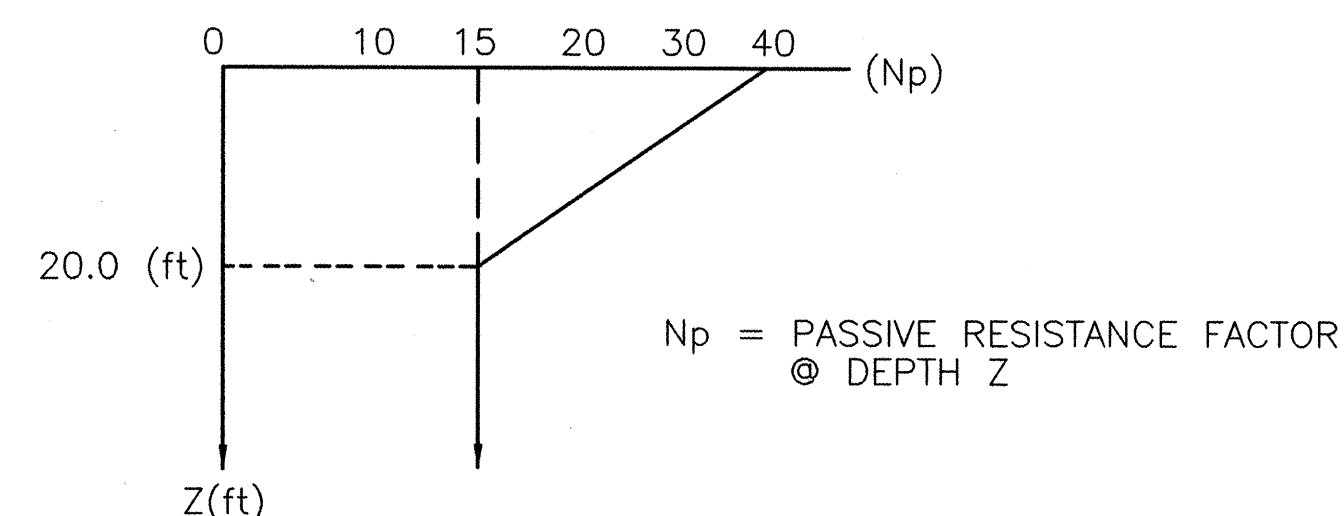
- DESIGN OF MSE WALLS SHALL BE AS PER AASHTO SPECIFICATIONS, 1996, SIXTEENTH EDITION AND CURRENT INTERIMS REQUIREMENTS EXCEPT AS FOLLOWS:

- THE DESIGN HORIZONTAL PRESSURE ON THE PANEL FACES SHALL BE DETERMINED USING HORIZONTAL EARTH PRESSURE COEFFICIENTS WHICH ARE DEPENDENT ON THE SOIL REINFORCEMENT SYSTEM AS SHOWN IN THE DIAGRAM BELOW. THE HORIZONTAL PRESSURES SHALL BE COMPUTED BASED ON THE APPLICABLE PRESSURE COEFFICIENT K_z MULTIPLIED BY THE SUM OF THE WEIGHT OF THE OVERBURDEN AT A GIVEN DEPTH Z PLUS ALL APPLICABLE LIVE LOAD SURCHARGE AND OTHER REQUIRED DESIGN SURCHARGE. MEYERHOFF VERTICAL PRESSURES ARE NOT REQUIRED FOR INTERNAL STABILITY COMPUTATIONS.



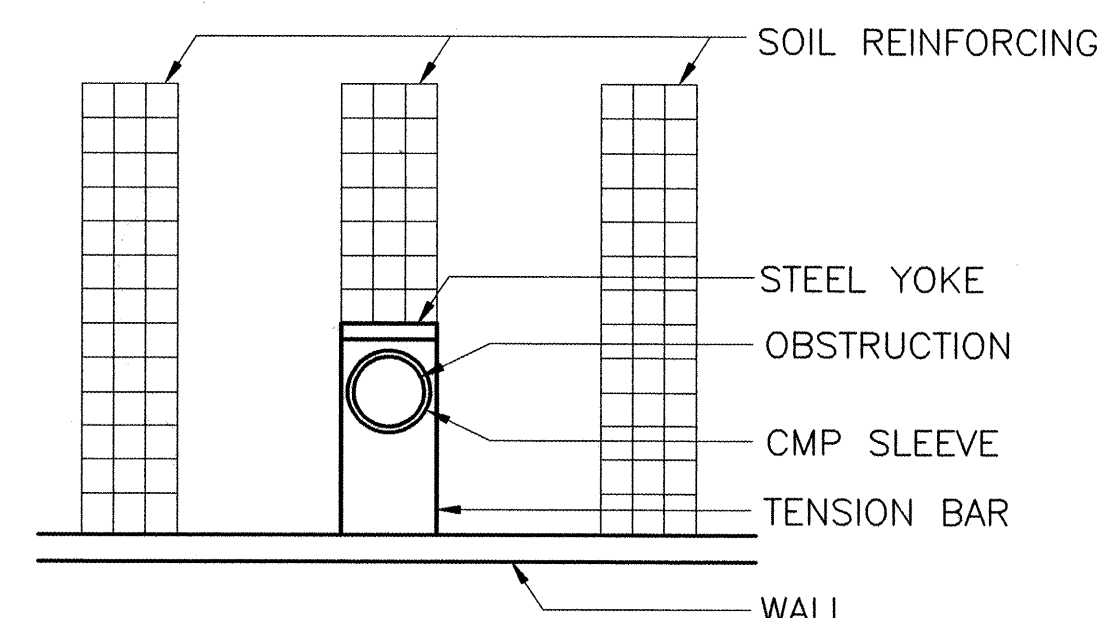
HORIZONTAL EARTH PRESSURE COEFFICIENTS

- FOR GRID STEEL REINFORCEMENT SYSTEMS WITH TRANSVERSE BAR SPACING OF OR GREATER THAN 6" THE PULLOUT FACTORS FOR USE IN THE PASSIVE RESISTANCE COMPUTATION OF THE CROSSBARS SHALL BE AS SHOWN IN THE DIAGRAM BELOW.



MESH REINFORCEMENT PULLOUT FACTORS

- WHERE OBSTRUCTIONS SUCH AS DEEP FOUNDATIONS, INLETS, ETC. ARE PLACED IN THE REINFORCEMENT SOIL BACKFILL, A STRUCTURAL FRAME ("YOKE") SHALL BE DESIGNED TO PLACE REINFORCEMENTS. CUTTING OF REINFORCEMENTS IS NOT PERMITTED. THE REINFORCEMENTS SHALL NOT BE CONNECTED TO THE OBSTRUCTION. THE COST OF THE STRUCTURAL FRAMES IS CONSIDERED INCIDENTAL TO THE WORK AND NO ADJUSTMENT IN PAYMENT WILL BE MADE.



NOTE:
TO AVOID CONFLICTS WITH OBSTRUCTIONS & SOIL REINFORCEMENT, THE REINFORCING MESH WILL BE FASTENED TO A YOKE BEYOND THE OBSTRUCTION USING A DETAIL SIMILAR TO THAT SHOWN. ALL PORTIONS OF THE YOKE EXTENSION WILL BE DESIGNED BY THE WALL FABRICATOR.

PLACEMENT OF SOIL REINFORCEMENT AT OBSTRUCTIONS

NO SCALE

QUALIFIED PRODUCTS LIST FOR EARTH RETAINING WALLS (MSE)

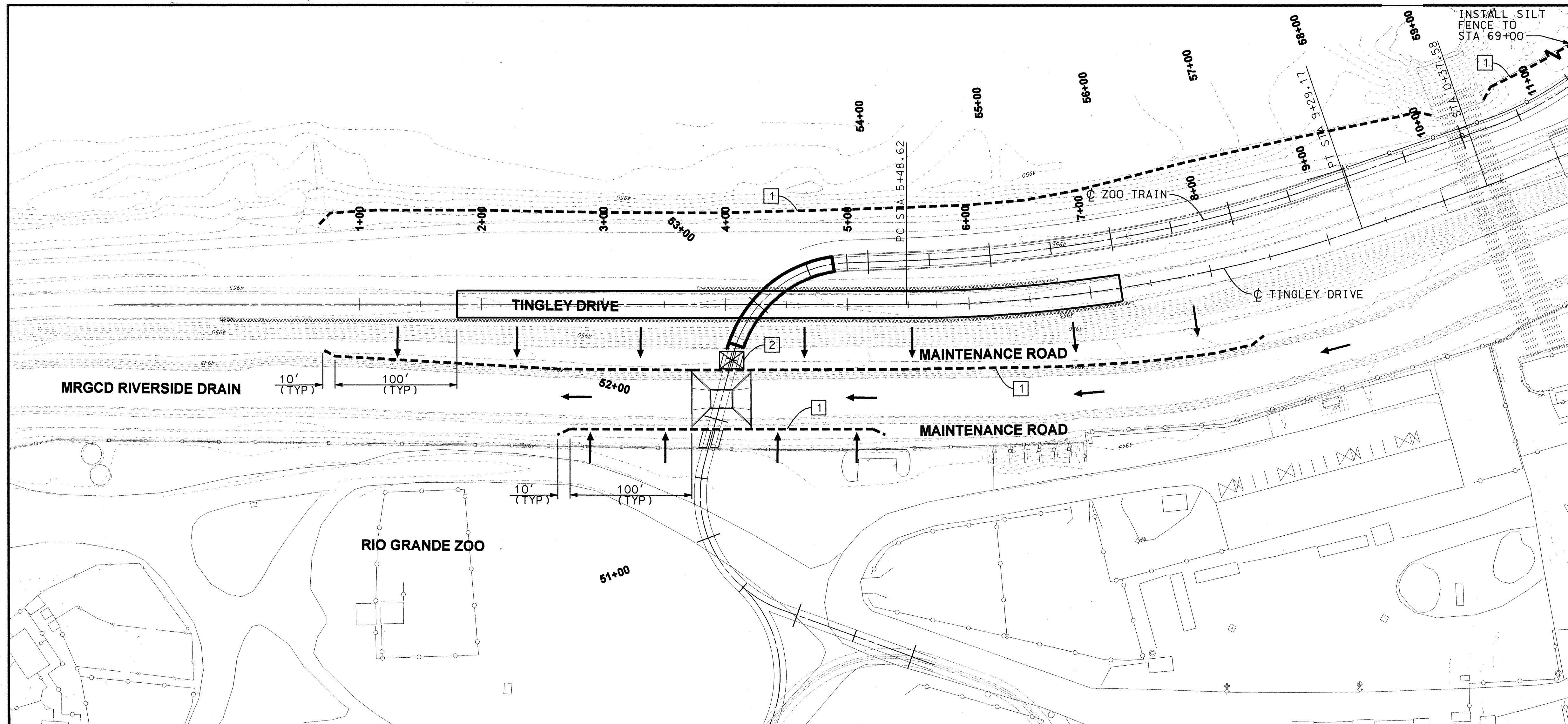
- HILFIKER RETAINING WALLS, CALIFORNIA.
- REINFORCED EARTH COMPANY, VIRGINIA.
- RETAINED EARTH WALL MANUFACTURED BY VSL, TEXAS.

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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
ZOO / BIO PARK TRAIN	
TRAIN MSE WALL SECTIONS AND NOTES	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004
DESIGN REVIEW COMMITTEE	CITY ENGINEER
CITY PROJECT NO.	ZONE MAP NO.
6978.01	J-12, J-13, J-14
SHEET	OF
18	33

RECORD DRAWING

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MESA REPRO



KEYED NOTES

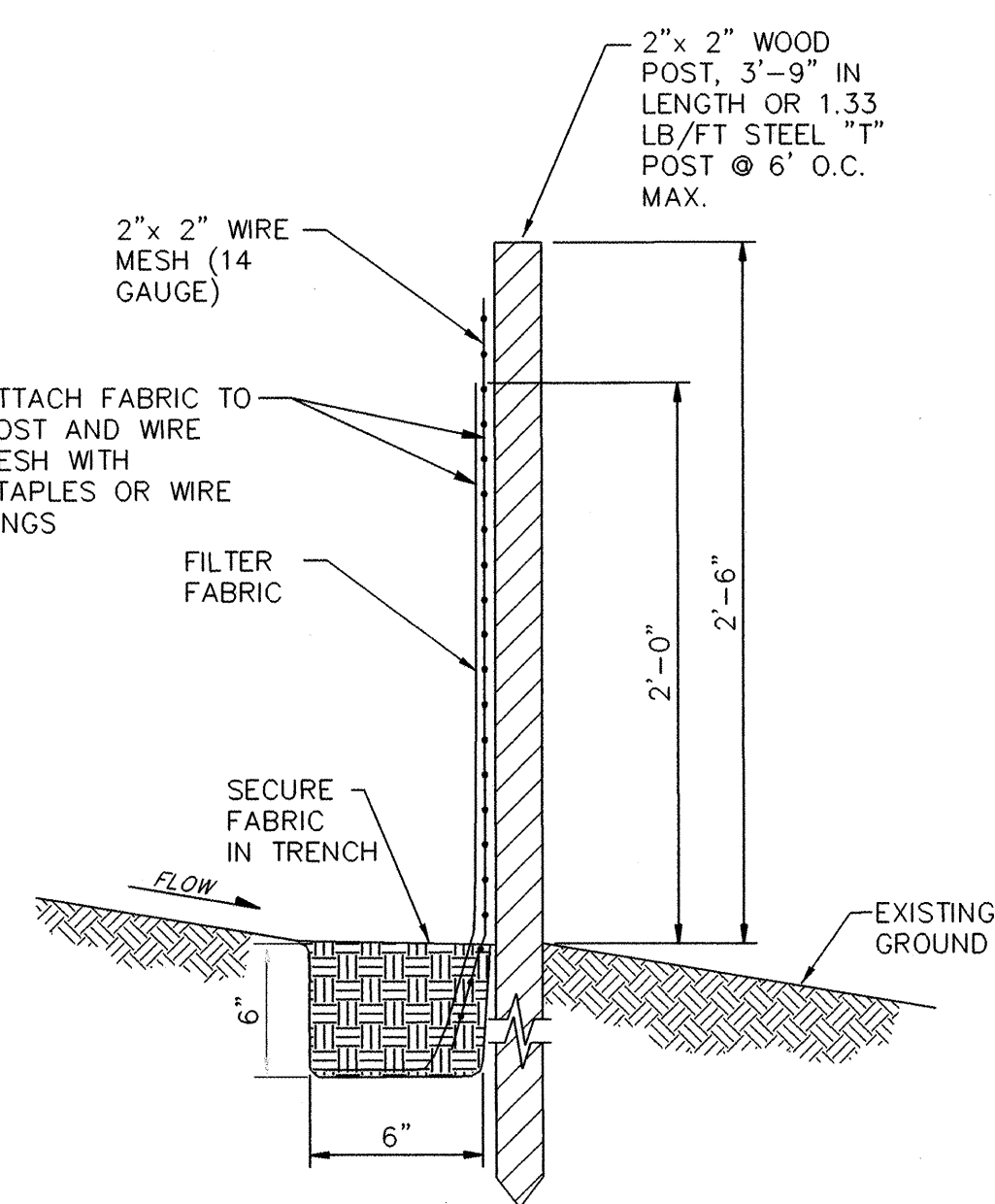
- 1 INSTALL SILT FENCE
- 2 INSTALL DROP INLET PROTECTION

NOTES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE TO ADJACENT PROPERTIES.
2. IF MEASURES PROVIDED IN THIS PLAN ARE INEFFECTIVE IN ANY MANNER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
3. ALL MATERIALS USED SHALL BE IN ACCORDANCE WITH NMDOT STANDARD SPECIFICATIONS OR AS APPROVED BY COA.
4. DROP INLET PROTECTION SHALL BE PROVIDED WITH EITHER SILT FENCE OR STRAW BALES PER DETAILS SHOWN ON THIS SHEET.
5. CONTRACTOR SHALL USE EXTREME CARE TO MINIMIZE DOWNSTREAM SEDIMENT TRANSFER WHEN WORKING IN OR ADJACENT TO THE RIVERSIDE DRAIN.

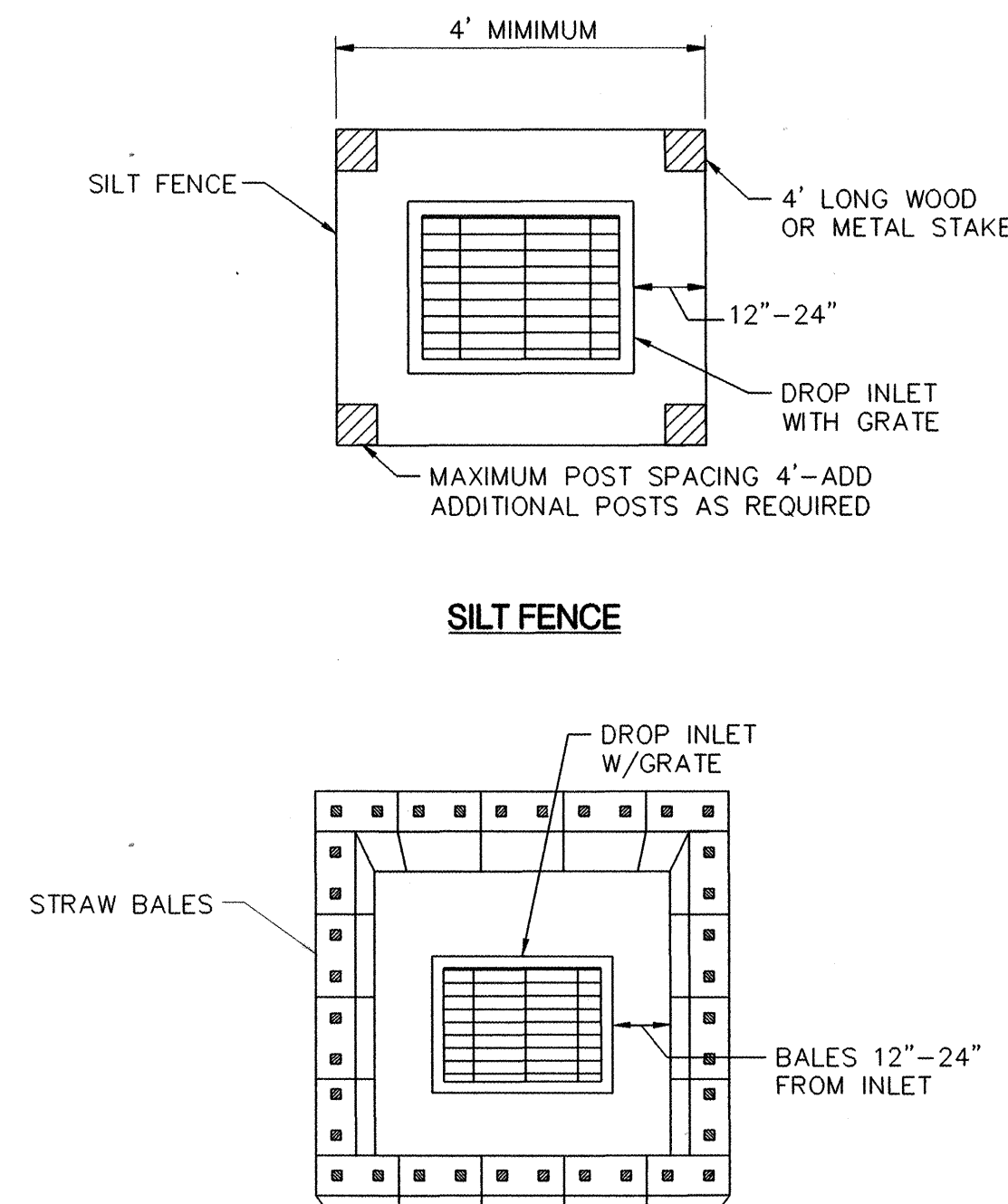
LEGEND

- SILT FENCE
- ⊠ DROP INLET PROTECTION
- DIRECTION OF FLOW

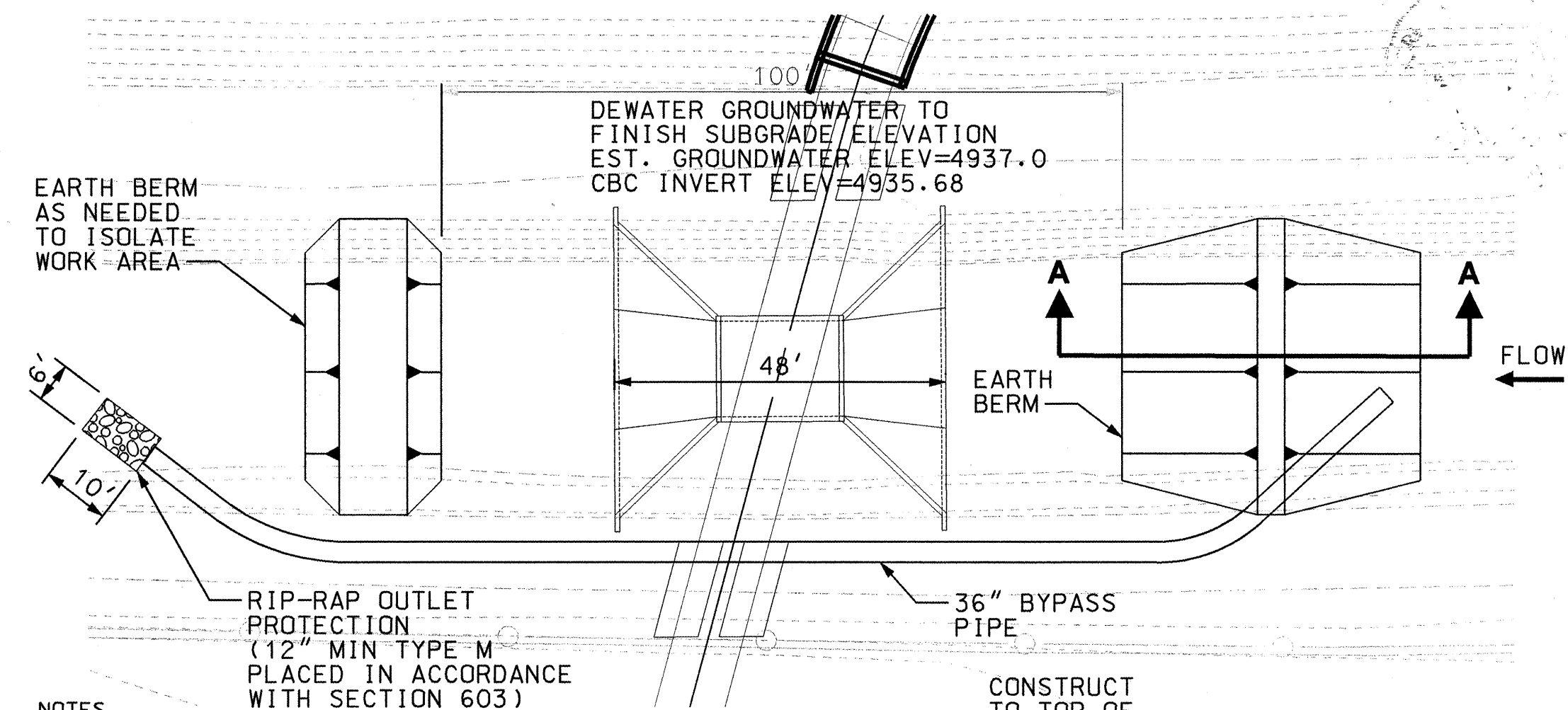


EROSION CONTROL - SILT FENCE

NOTE:
AT LOCATIONS WHERE SILT FENCE IS INSTALLED ADJACENT TO A DRAINAGE CONTROL BERM, THE TWO SHALL OVERLAP AT THE UPSTREAM END OF THE SILT FENCE- SUCH THAT RUNOFF MUST FLOW THROUGH THE FENCE AND NOT AROUND THE END.



DROP INLET PROTECTION OPTIONS



SUGGESTED BYPASS PIPING & DEWATERING DETAIL

- NOTES
1. ALL WORK WITHIN THE RIVERSIDE DRAIN SHALL BE PERFORMED AND COMPLETED BETWEEN NOVEMBER 1, 2004 AND FEBRUARY 28, 2005.
 2. CONTRACTOR MAY DISCHARGE PIPE FROM GROUNDWATER DEWATERING OPERATION INTO BYPASS PIPE. IF SEPARATE DISCHARGE PIPE IS USED, RIP-RAP OUTLET PROTECTION SHALL BE INSTALLED AS DETAILED FOR BYPASS PIPE.
 3. CONTRACTOR SHALL SUBMIT PROPOSED CHANGES TO THIS SUGGESTED PLAN TO THE ENGINEER TWO WEEKS PRIOR TO COMMENCING WORK.
 4. EARTH BERMS SHALL BE SUITABLY COMPACTED TO PREVENT WASHOUT.

03-MAR-2004
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BHI JOB NO. 040133

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	A.S. HERNANDEZ, Inc.	ACCS BRASS TABLE STAMPED "14-112"	DATE	FIELD NOTES	NO.	BY	REMARKS
INSPECTOR	AS HERNANDEZ, Inc.	ON CENTRAL AVE. 29.5' NE OF	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	EXISTING EXPANSION JOINT ON THE RIO	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	GRANDE BRIDGE.	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	STATE PLANE COORDINATES (CENTRAL	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	ZONE 14NAD27)	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	NAD83) E=371837.70 (GROUND)	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	GROUND TO GRID FACTOR = 0.99968083	DATE	NO.	NO.	DATE	DATE
DATE	04/15/05	ELEVATION = 4962.83 (NGVD 29)	DATE	NO.	NO.	DATE	DATE

CITY OF ALBUQUERQUE	
PUBLIC WORKS DEPARTMENT	
ENGINEERING DEVELOPMENT GROUP	
DESIGNED BY	LAE
DRAWN BY	LAH
CHECKED BY	GP
DATE	1/2004
DATE	1/2004
DATE	1/2004

ZOO / BIO PARK TRAIN	
TEMPORARY EROSION & SEDIMENT CONTROL PLAN	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
MO./DAY/YR.	MO./DAY/YR.
LAST DESIGN UPDATE	LAST DESIGN UPDATE
DESIGN REVIEW COMMITTEE	CITY ENGINEER
MO./DAY/YR.	MO./DAY/YR.
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MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	
701192	

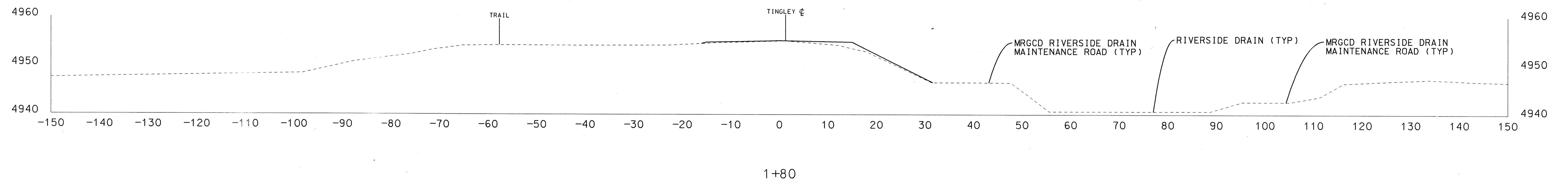
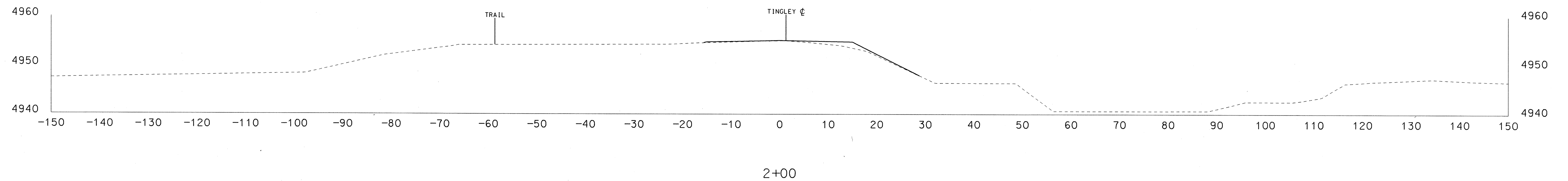
ZONE MAP NO.	
J-12, J-13, K-15	

SHEET	
19	

OF	
33	

RECORD DRAWING

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MESA REPRO



Signature
LEONOR R. ARMAO
1981
14373
10-26-05
GERALD K. PARKER
14373
2-22-04
REGISTERED PROFESSIONAL ENGINEER

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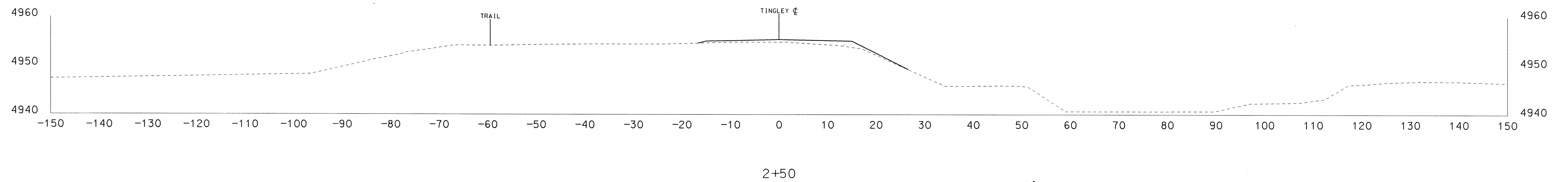
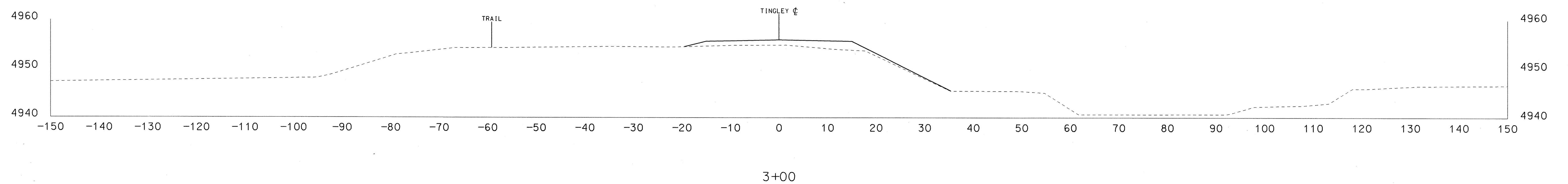
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ZOO / BIO PARK TRAIN CROSS SECTIONS			
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CITY PROJECT NO. 701192		ZONE MAP NO. J-12, J-13, K-13	SHEET 20 OF 33

02-FEB-2004
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RECORD DRAWING

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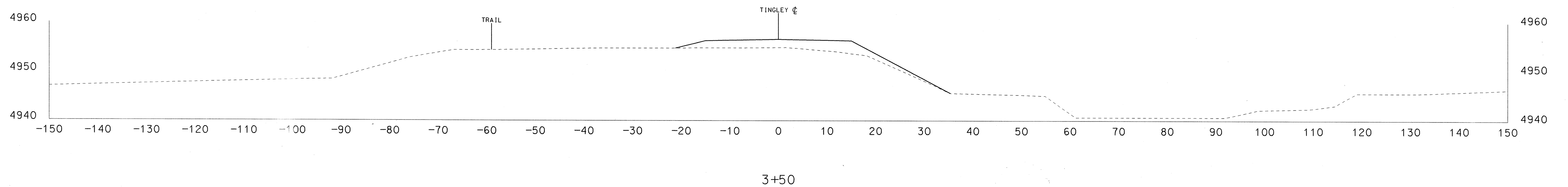
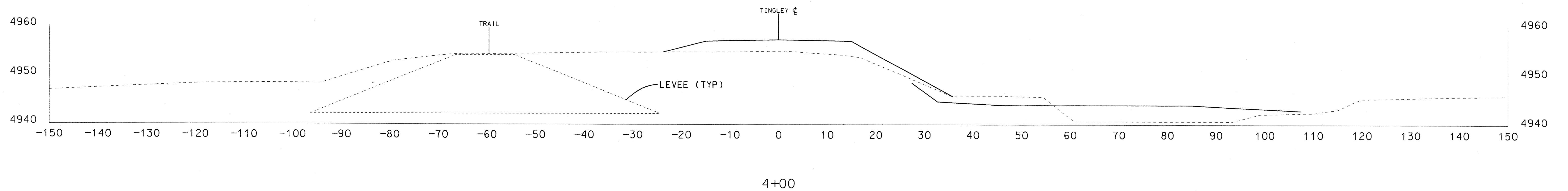


James Arango
Gerald K. Parker
10-26-05
2-02-04

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 CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN CROSS SECTIONS			
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APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
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701192	J-12, J-13, K-13	21	33

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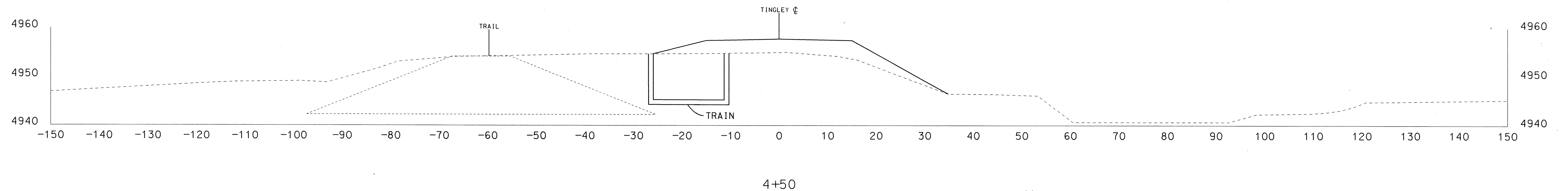
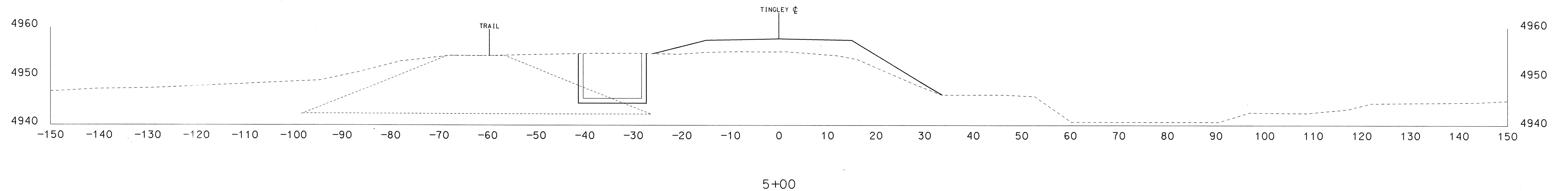


James R. Armijo
10-26-05
14375
2-02-04
14375
2-02-04

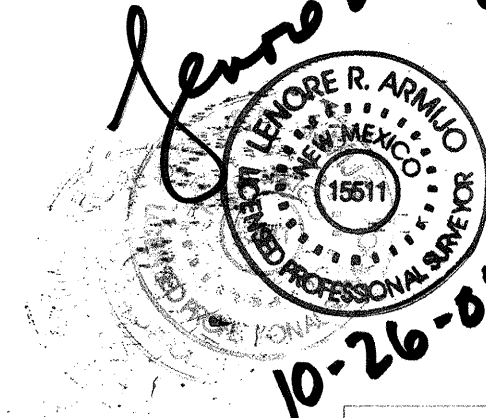
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ZOO / BIO PARK TRAIN CROSS SECTIONS			
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DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
701192	J-12, J-13, K-13	22	33

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Gerardo R. Armijo
Gerardo K. Parra
10-26-05



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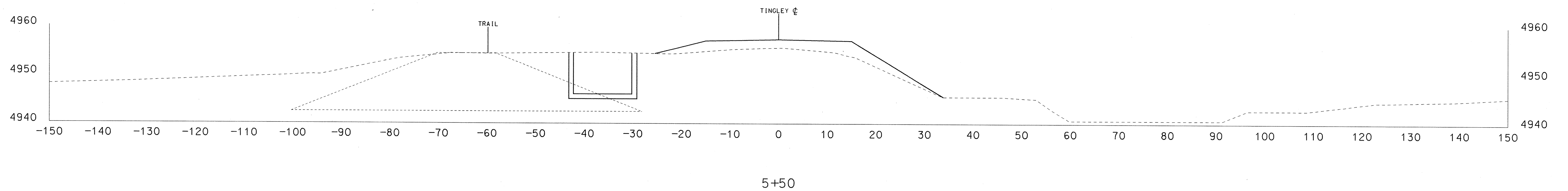
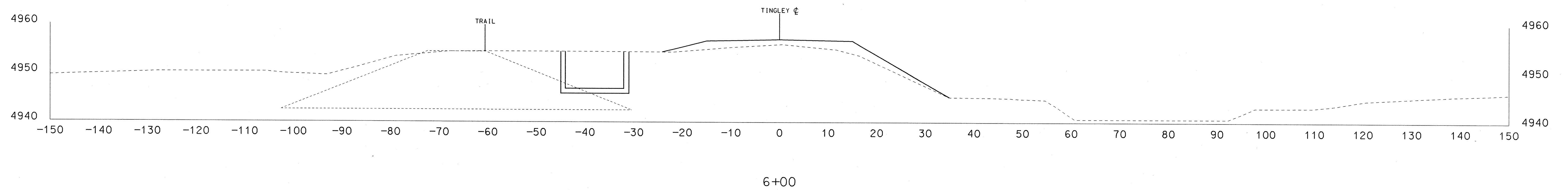
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ZOO / BIO PARK TRAIN CROSS SECTIONS			
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APPROVED MAR - 9 2004	APPROVED MAR - 9 2004	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
701192	J-12, J-13, K-13	23	33

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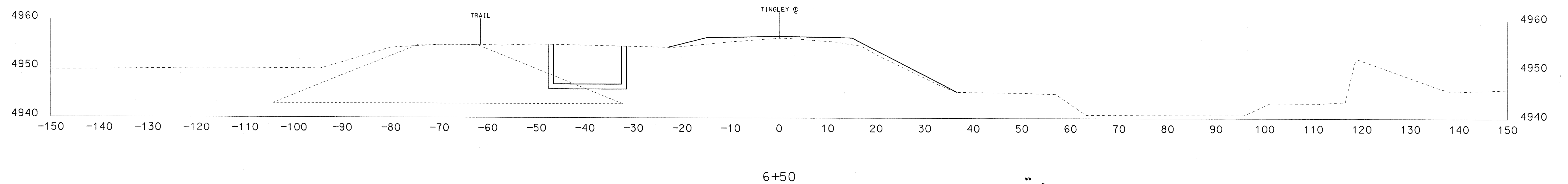
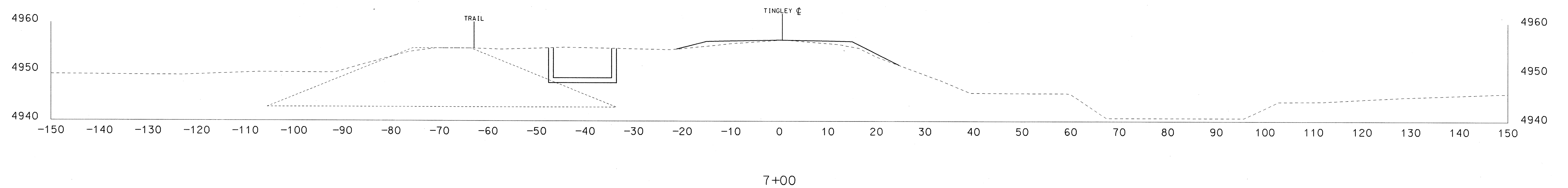


John King
10-26-05
14373
2-62-04
14373
2-62-04

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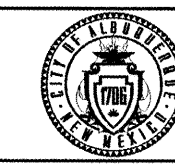
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CITY PROJECT NO. 701192	ZONE MAP NO. J-12, J-13, K-13	SHEET 24	33 28

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MESA REPRO



John Arango
Gerald K. Par...
10-26-05
2-02-06

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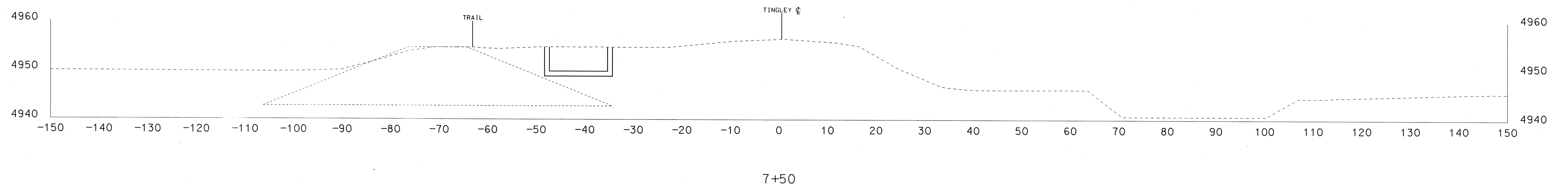
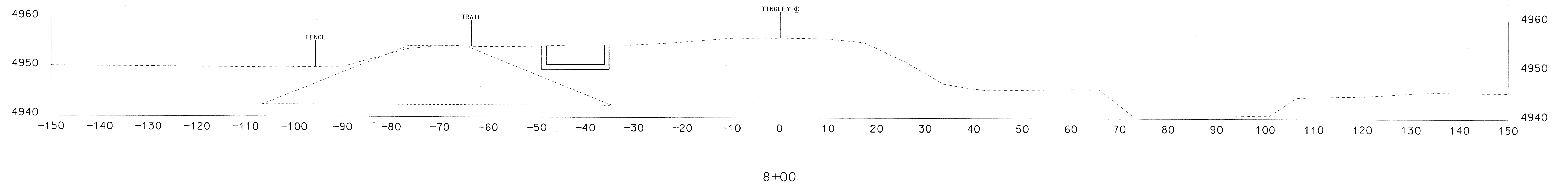
			
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ZOO / BIO PARK TRAIN CROSS SECTIONS			
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701192	J-12, J-13, K-13	25	33

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MESA REPRO



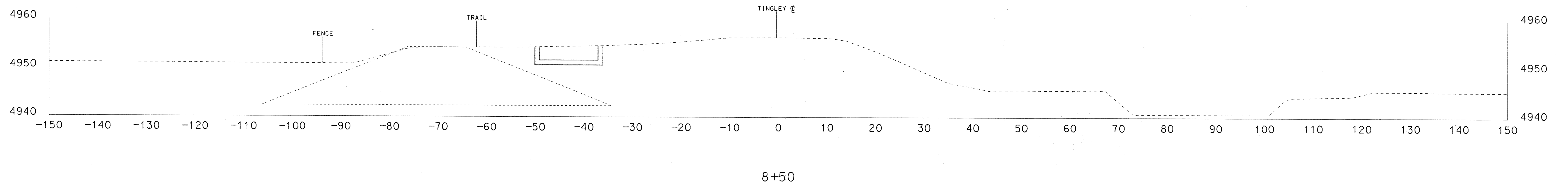
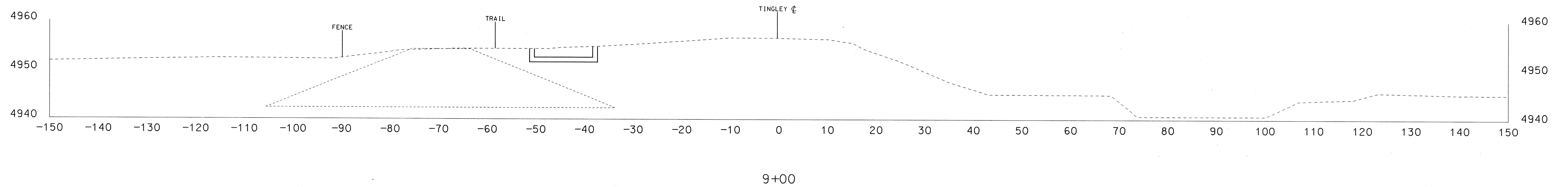
James Aring
10-26-05

Yvette K. Parker
2-02-04

Bohannon & Huston
Court yard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

 CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN CROSS SECTIONS			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	33
701192	J-12, J-13, K-13	26	28

SCANNED BY
MESA REPRO



James Arango
10-26-05
SEAL: GERALD K. PARKER, 14373, 2-02-04

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ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

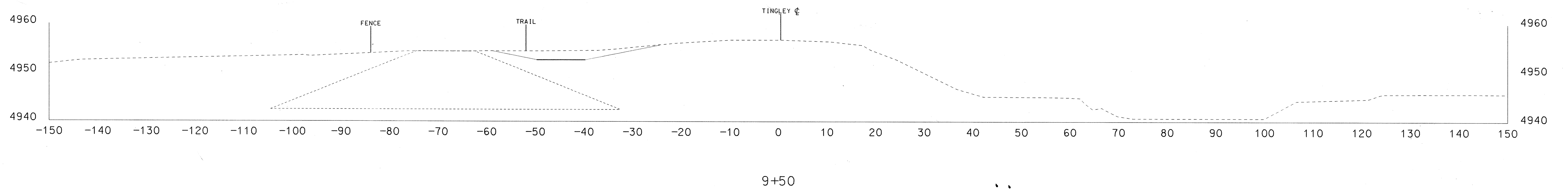
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN CROSS SECTIONS			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
701192	J-12, J-13, K-13	27	33

02-FEB-2004
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BHI JOB NO. 040133

RECORD DRAWING

SCANNED BY
MESA REPRO



James Arango
10-26-06

Gerald K. Park
2-6-04



Bohannon & Huston
Court yard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ZOO / BIO PARK TRAIN CROSS SECTIONS			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAR - 9 2004	APPROVED MAR - 9 2004		
DESIGN REVIEW COMMITTEE	CITY ENGINEER	LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
701192	J-12, J-13, K-13	28	33

02-FEB-2004
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BHI JOB NO. 040133

RECORD DRAWING

GENERAL NOTES

1. THE EXISTING UTILITIES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES. SHOULD ANY CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE EXISTING UTILITY LINES AND INFRASTRUCTURE WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO THE EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS, THE COUNTRY CLUB OR OTHER CONTRACTORS ON-SITE.
4. CONTRACTOR SHALL NOTIFY CITY OF ALBUQUERQUE PWD WATER SYSTEMS DIVISION SEVEN (7) WORKING DAYS IN ADVANCE OF NEEDING EXECUTION OF THE WATER SHUT-OFF PLAN (857-8200).
5. ONLY PWD WATER SYSTEM DIVISION PERSONNEL ARE AUTHORIZED TO OPERATE VALVES.

VALVES TO BE CLOSED

1021, 1022
935, 937, 938
61, 62
72

→ VALVE #

CENTRAL/TINGLEY
CENTRAL/NEW YORK
LAGUNA/KIT CARSON
KIT CARSON

INDICATES VALVE TO
CLOSE FOR SHUT-OFF
PLAN

WATER VALVE SHUT-OFF PLAN

NOT TO SCALE

ADDENDUM #1

Bohannon **Huston**

Courtyard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

AQUATIC PARK SANITARY SEWER & WATER LINE
GENERAL NOTES & WATER VALVE SHUT-OFF PLAN

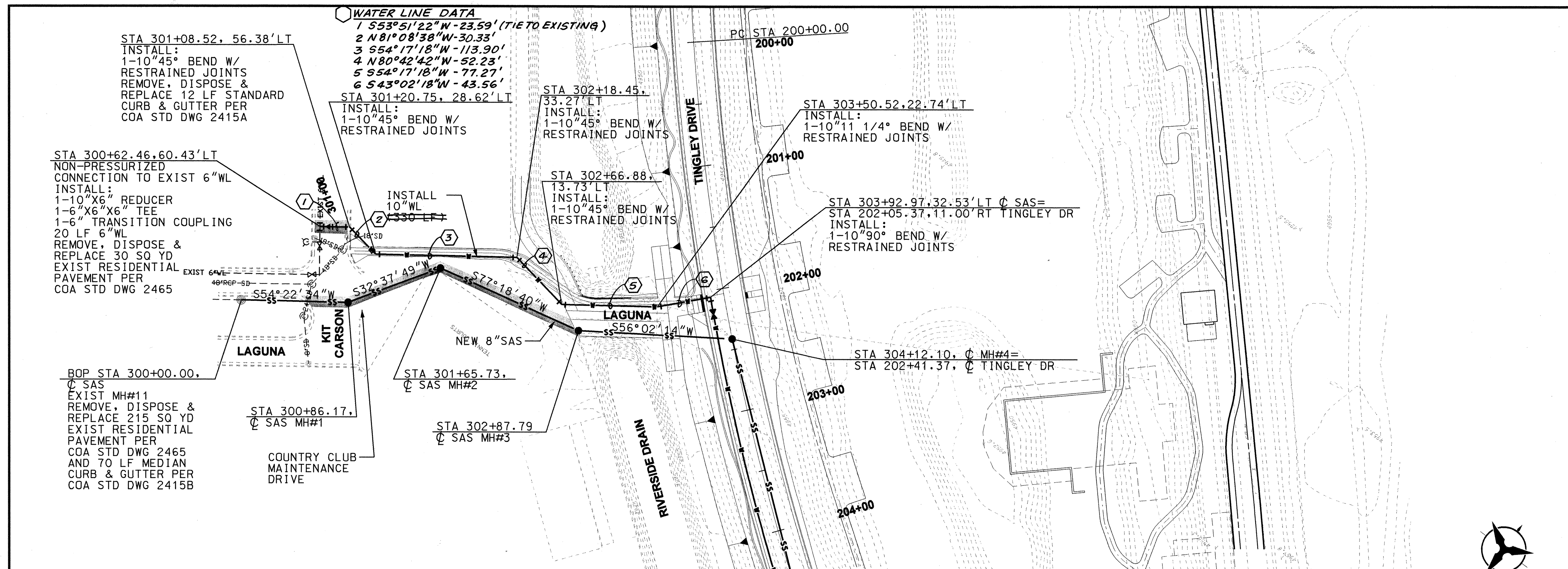
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	701192	ZONE MAP NO.	J-12, J-13, K-13	SHEET	29	OF	33
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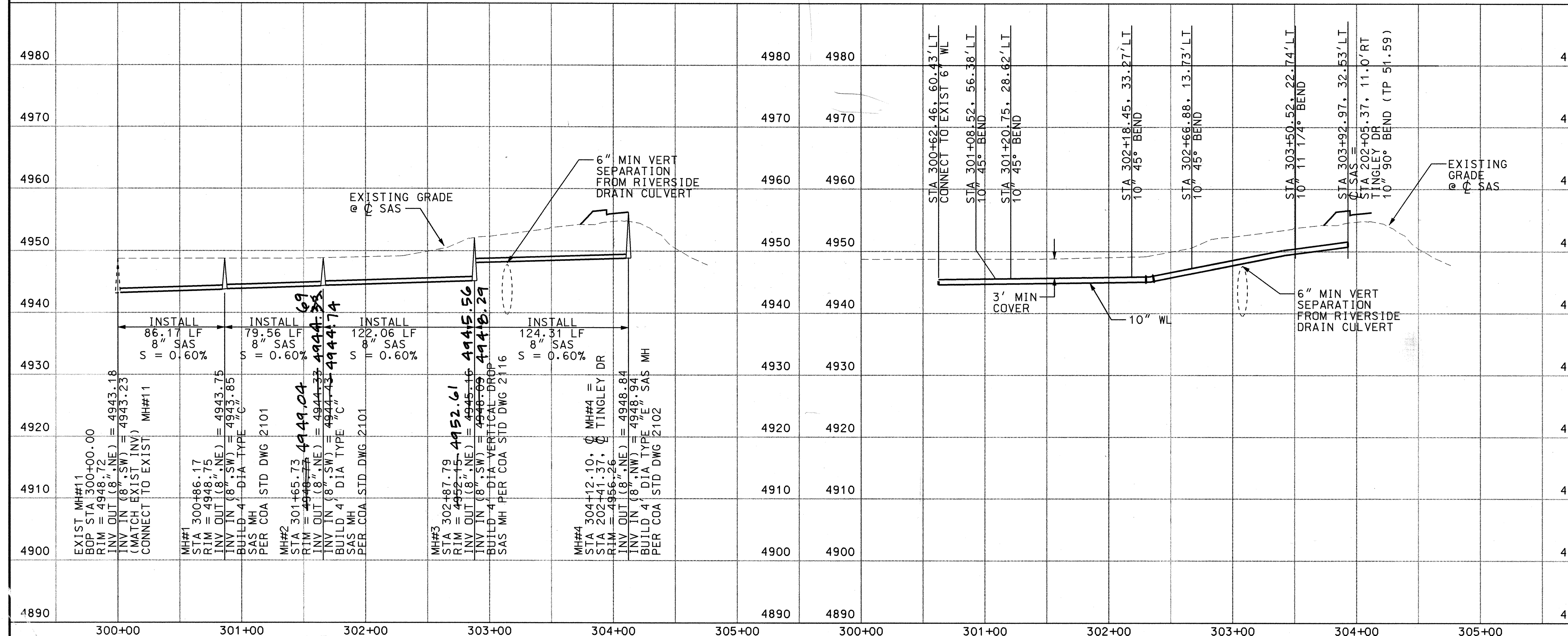
BHI JOB NO. 040133

RECORD DRAWING

SCANNED BY
MESA REPRO



AQUATIC PARK SANITARY SEWER AND WATER LINE



NOTES

- CONTRACTOR SHALL PROVIDE ACCESS TO COUNTRY CLUB MAINTENANCE DRIVE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR NOT TO CREATE A HIGH POINT IN THE WATERLINE IN LAGUNA AND TINGLEY DRIVE. THE HIGH POINT SHALL OCCUR AT THE CONNECTION POINT IN CENTRAL AVENUE.

RESTRAINING JOINT TABLE

MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	10"	12"
6"x6"x6" TEE	1	-	-
10"x10"x10" TEE	-	24	-
10"x6" REDUCER	-	42	-
12"x10" REDUCER	-	-	25
90° HORIZ BEND	18	28	-
45° HORIZ BEND	-	12	-
22.5° HORIZ BEND	-	6	-
11.25° HORIZ BEND	-	3	-
GATE VALVE/CAP	44	68	80

- NOTE:
- ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
 - THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE POINTS WITHIN 20 LF OF MJ SHALL BE RESTRAINED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ABOVE (SEE NOTE 2 ABOVE).
 - ALL CAPS SHALL UTILIZE PCC BLOCKING, UNLESS OTHERWISE NOTED.
 - RESTRAINED LENGTH IS ON LARGE SIDE OF ALL REDUCERS.

ADDENDUM #1

Bohannon & Huston
Courtney 7500 Jefferson St NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

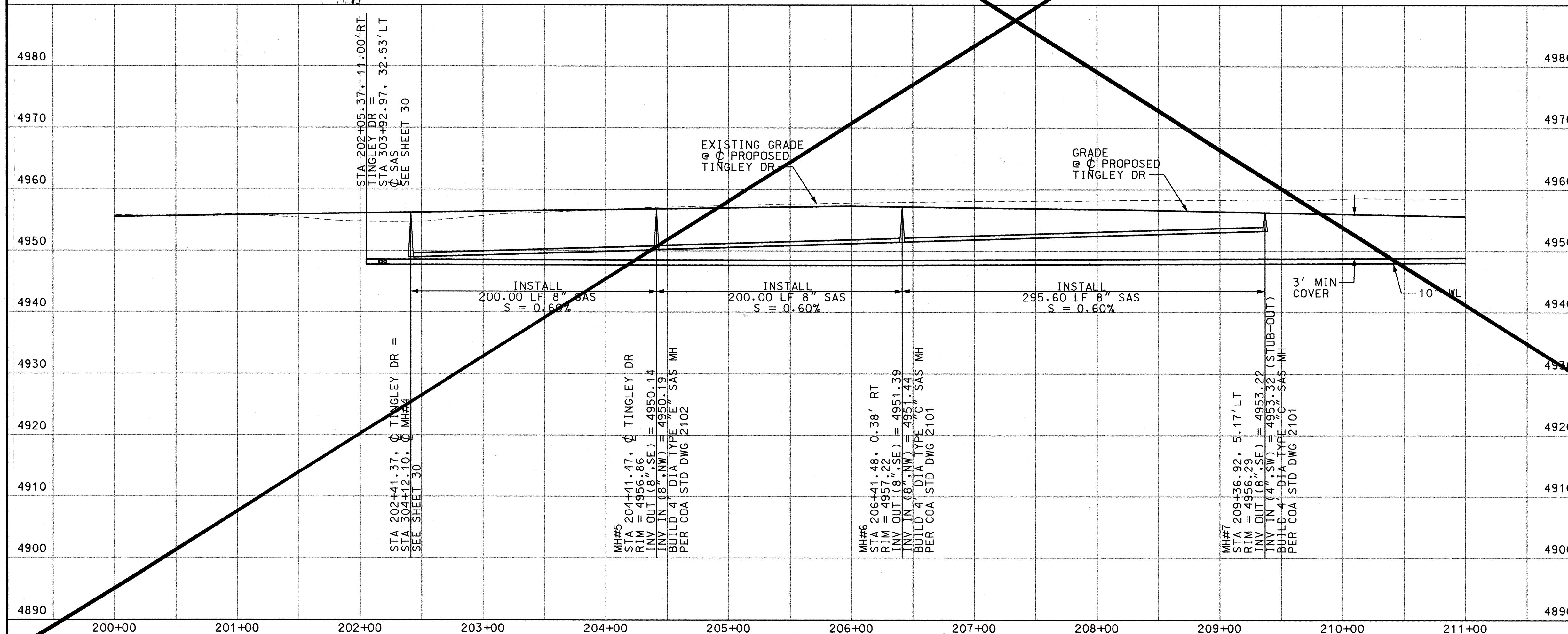
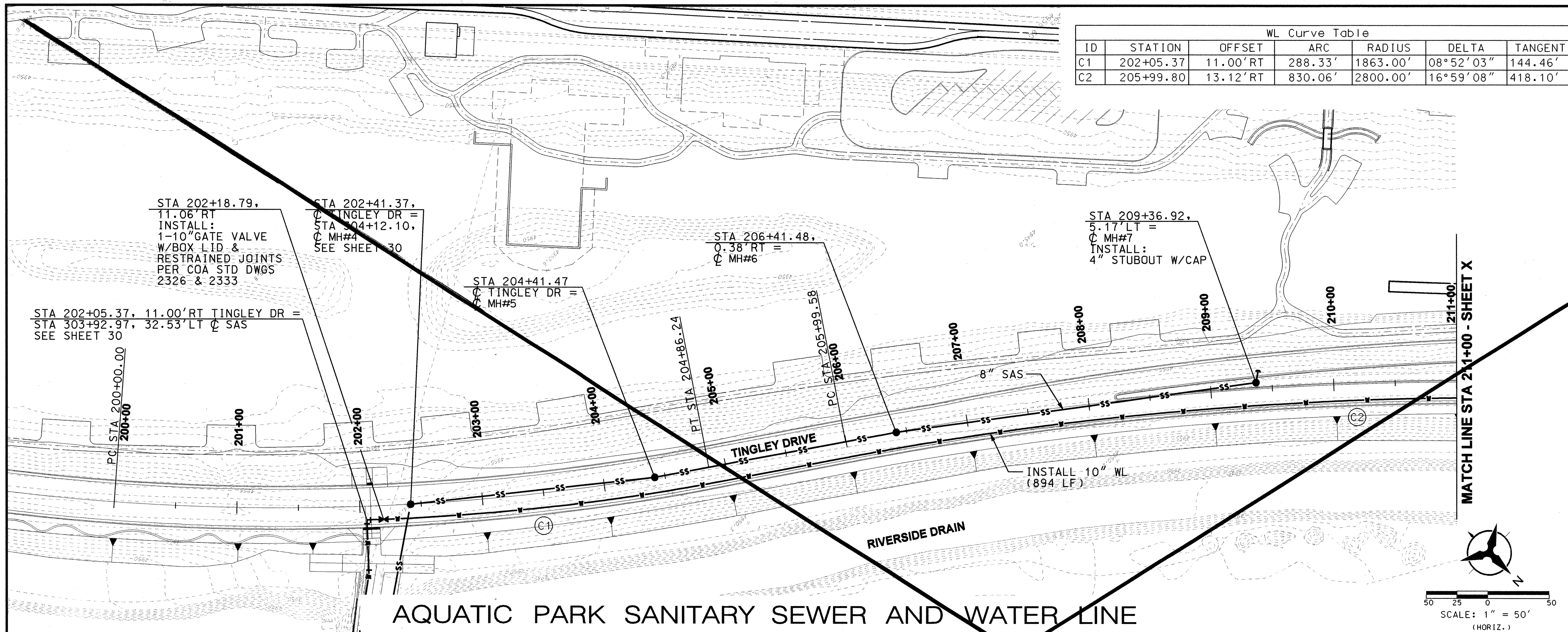
AQUATIC PARK SANITARY SEWER & WATER LINE
PLAN & PROFILE
BOP TO STA 203+00

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
LAST DESIGN UPDATE			

CITY PROJECT NO. 701192 ZONE MAP NO. J-12, J-13, K-13 SHEET 30A OF 33

RECORD DRAWING

SCANNED BY
MESA REPRO



15-MAR-2004
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BHI JOB NO. 040133

SCALE: 1" = 50' (HORIZ.)
1" = 10' (VERT.)

NOTES

- CONTRACTOR NOT TO CREATE A HIGH POINT IN THE WATERLINE IN LAGUNA AND TINGLEY DRIVE. THE HIGH POINT SHALL OCCUR AT THE CONNECTION POINT IN CENTRAL AVENUE.

RESTRAINING JOINT TABLE

MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	10"	12"
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90° HORIZ BEND	18	28	-
45° HORIZ BEND	-	12	-
22.5° HORIZ BEND	-	6	-
11.25° HORIZ BEND	-	3	-
GATE VALVE/CAP	44	68	80

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ADDENDUM #1

Bohannon & Huston
Courtyard 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING SPATIAL DATA ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

AQUATIC PARK SANITARY SEWER & WATER LINE
PLAN & PROFILE
STA 202+00 TO STA 211+00

DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL

LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.

701192

ZONE MAP NO.
J-12, J-13,
K-13

SHEET
31 OF 33

RECORD DRAWING

WL Curve Table

ID	STATION	OFFSET	ARC	RADIUS	DELTA	TANGENT
C1	202+05.37	11.00' RT	288.33'	1863.00'	08°52'03"	144.46'
C2	205+99.80	13.12' RT	830.06'	2800.00'	16°59'08"	418.10'

STA 202+18.79,
11.06' RT
INSTALL:
1-10" GATE VALVE
W/BOX LID &
RESTRAINED JOINTS
PER COA STD DWGS
2326 & 2333

STA 202+41.37,
C TINGLEY DR =
STA 304+12.10,
C MH#4
SEE SHEET 30

STA 204+41.47
C TINGLEY DR =
C MH#5

STA 206+41.48,
0.38' RT =
C MH#6

STA 209+36.92,
5.17' LT =
C MH#7
INSTALL:
4" STUBOUT W/CAP

STA 202+05.37, 11.00' RT TINGLEY DR =
STA 303+92.97, 32.53' LT C SAS
SEE SHEET 30
N=148°180.30'
E=373°175.57'

STA 202+44.53
PI STA 202+44.53
Δ = 15°03'33" LT
R = 1850.00'
L = 486.24'
T = 244.53'

STA 210+06.18
PI STA 210+06.18
Δ = 17°07'41" RT
R = 2700.00'
L = 807.14'
T = 406.60'

8" SAS

INSTALL 10" WL
(894 LF)

RIVERSIDE DRAIN

TINGLEY DRIVE

PC STA 205+99.80
13.12' RT

PT STA 204+91.90
12.18' RT

PC STA 204+86.24
11.33' RT

PT STA 204+86.24
11.33' RT

PC STA 200+00.00
11.00' RT

PT STA 200+00.00
11.00' RT

PC STA 203+98.67
11.00' RT

PT STA 203+98.67
11.00' RT

PC STA 202+00.00
11.00' RT

PT STA 202+00.00
11.00' RT

PC STA 201+00.00
11.00' RT

PT STA 201+00.00
11.00' RT

PC STA 200+00.00
11.00' RT

PT STA 200+00.00
11.00' RT

PC STA 199+00.00
11.00' RT

PT STA 199+00.00
11.00' RT

PC STA 198+00.00
11.00' RT

PT STA 198+00.00
11.00' RT

PC STA 197+00.00
11.00' RT

PT STA 197+00.00
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PC STA 196+00.00
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PC STA 192+00.00
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PC STA 191+00.00
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PC STA 181+00.00
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PC STA 179+00.00
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PC STA 178+00.00
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PC STA 160+00.00
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PT STA 160+00.00
11.00' RT

PC STA 159+00.00
11.00' RT

PT STA 159+00.00
11.00' RT

PC STA 158+00.00
11.00' RT

PT STA 158+00.00
11

NOTES

1. CONTRACTOR NOT TO CREATE A HIGH POINT IN THE WATERLINE IN LAGUNA AND TINGLEY DRIVE. THE HIGH POINT SHALL OCCUR AT THE CONNECTION POINT IN CENTRAL AVENUE.

NOTE:

1. ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE POINTS WITHIN 20 LF OF MJ SHALL BE RESTRAINED AT THE CONTRACTOR EXPENSE.
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5. RESTRAINED LENGTH IS ON LARGE SIDE OF ALL REDUCERS.

Bohannon  **Huston**_{INC.}
 Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

AQUATIC PARK SANITARY SEWER & WATER LINE
PLAN & PROFILE
STA 202+00 TO STA 211+00

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
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DESIGN REVIEW COMPLETE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE		

CITY PROJECT NO.	701192	ZONE MAP NO. J-12, J-13, K-13	SHEET 31A OF 3
------------------	--------	-------------------------------------	----------------

RECORD DRAWING

BHI JOB NO. 040133

SCALE: 1" = 50' (HORIZ.)
1" = 10' (VERT.)

SCANNED BY
MESA REPRO

MATCH LINE STA 211+00 - SHEET X

STA 213+21.11, 11.44' RT
INSTALL:
1-10" GATE VALVE
W/BOX, LID &
RESTRAINED JOINTS
PER COA STD DWGS
2326 & 2333

RIVERSIDE DRAIN

STA 213+38.22, 69.13' LT
INSTALL:
80 LF 10" WL
1-10" CAP

STA 213+38.28, 11.34' RT
INSTALL:
1-10"X10"X10" TEE

INSTALL 10" WL
(1100 LF)

TINGLEY DRIVE

PC STA 219+34.34

MATCH LINE STA 222+00 - SHEET X

WL Curve Table					
ID	STATION	OFFSET	ARC	RADIUS	DELTA
C3	109+46.68	11.06' RT	369.70'	1700.00'	12° 27' 37"

NOTES

- CONTRACTOR NOT TO CREATE A HIGH POINT IN THE WATERLINE IN LAGUNA AND TINGLEY DRIVE. THE HIGH POINT SHALL OCCUR AT THE CONNECTION POINT IN CENTRAL AVENUE.

RESTRAINING JOINT TABLE

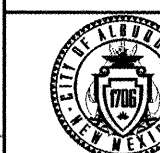
MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	10"	12"
6"x6"x6" TEE	1	-	-
10"x10"x10" TEE	-	24	-
10"x6" REDUCER	-	42	-
12"x10" REDUCER	-	-	25
90° HORIZ BEND	18	28	-
45° HORIZ BEND	-	12	-
22.5° HORIZ BEND	-	6	-
11.25° HORIZ BEND	-	3	-
GATE VALVE/CAP	44	68	80

- NOTE:
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ADDENDUM #1

Bohannon & Huston

Courtyard 1 - 500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING - SPATIAL DATA - ADVANCED TECHNOLOGIES



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

AQUATIC PARK SANITARY SEWER & WATER LINE

PLAN & PROFILE
STA 211+00 TO STA 222+00

DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL

LAST DESIGN UPDATE	MO./DAY/YR.		MO./DAY/YR.	
	DATE	BY	DATE	BY

CITY PROJECT NO. 701192 ZONE MAP NO. J-12, J-13, K-13 SHEET 32 OF 33

RECORD DRAWING

MATCH LINE STA 211+00 - SHEET 31

STA 213+21.11,
11.44' RT
INSTALL:
1-10" GATE VALVE
W/BOX, LID &
RESTRAINED JOINTS
PER COA STD DWGS
2326 & 2333

212+00 213+00 214+00 PT STA 214+06.72 215+00 216+00 217+00 218+00 219+00 PC STA 219+34.34 220+00 221+00 222+00

RIVERSIDE DRAIN

STA 213+38.22, 69.13' LT
INSTALL:
80 LF 10" WL
1-10" CAP

PT STA 214+33.47
10.65' RT

STA 213+38.28, 11.34' RT
INSTALL:
1-10"X10"X10" TEE

N 38° 29' 33" W
527.62'

N 38° 27' 10" W

INSTALL 10" WL
(1100 LF)

TINGLEY DRIVE

PC STA 219+46.68

WL Curve Table						
ID	STATION	OFFSET	ARC	RADIUS	TANGENT	
C3	219+46.68	11.06' RT	369.70'	1700.00'	12° 27' 37"	185.58'

219

E CURVE DATA
PI STA 221+36.18
 $\Delta = 15^\circ 19' 38''$
 $R = 1500.00'$
 $L = 401.27'$
 $T = 201.84'$

PC STA 219+34.34

MATCH LINE STA 222+00 - SHEET 33

AQUATIC PARK SANITARY SEWER AND WATER LINE

SCALE: 1" = 50'

50 25 0 25 50

RESTRAINING JOINT TABLE			
MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	10"	12"
6"x6"x6" TEE	1	-	-
10"x10"x10" TEE	-	24	-
10"x6" REDUCER	-	42	-
12"x10" REDUCER	-	-	25
90° HORIZ BEND	18	28	-
45° HORIZ BEND	-	12	-
22.5° HORIZ BEND	-	6	-
11.25° HORIZ BEND	-	3	-
GATE VALVE/CAP	44	68	80

NOTE:

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ADDENDUM #1

Court yard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

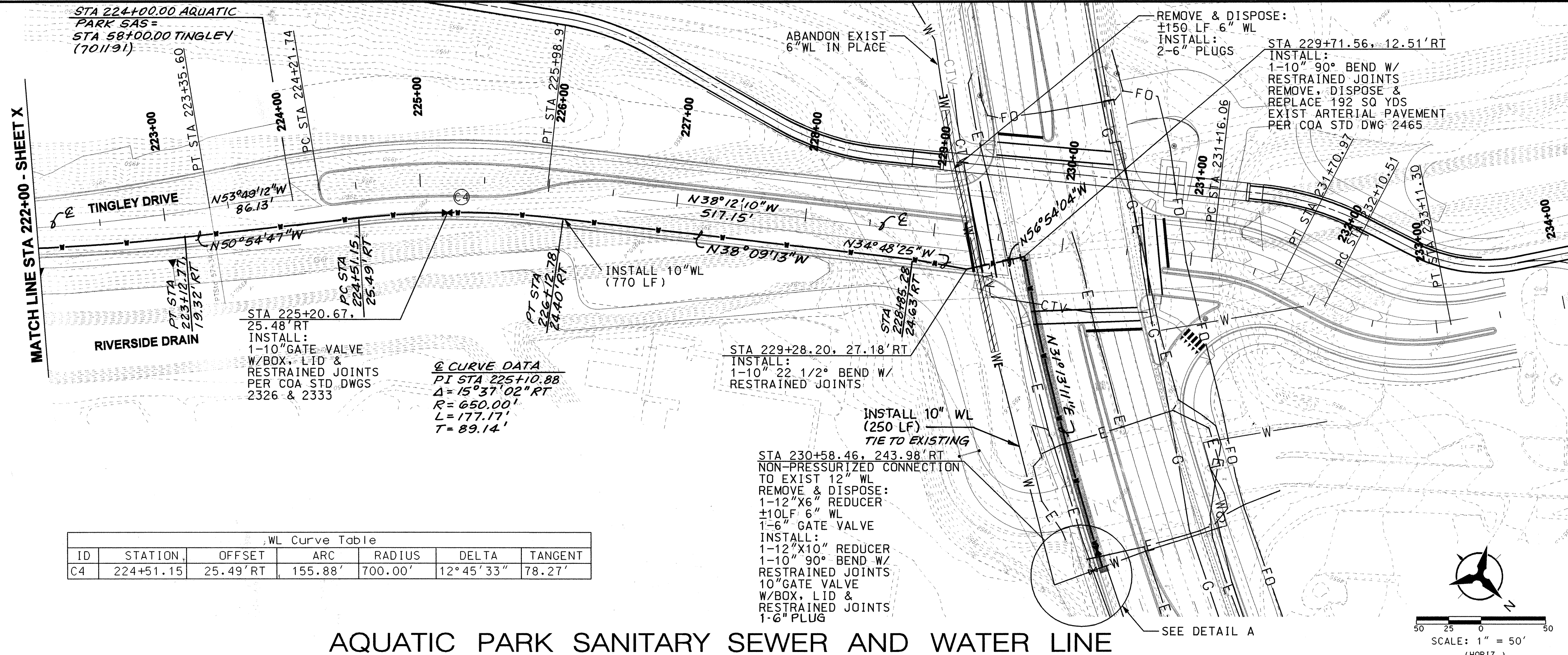
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
AQUATIC PARK SANITARY SEWER & WATER LINE PLAN & PROFILE STA 211+00 TO STA 222+00	

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.	

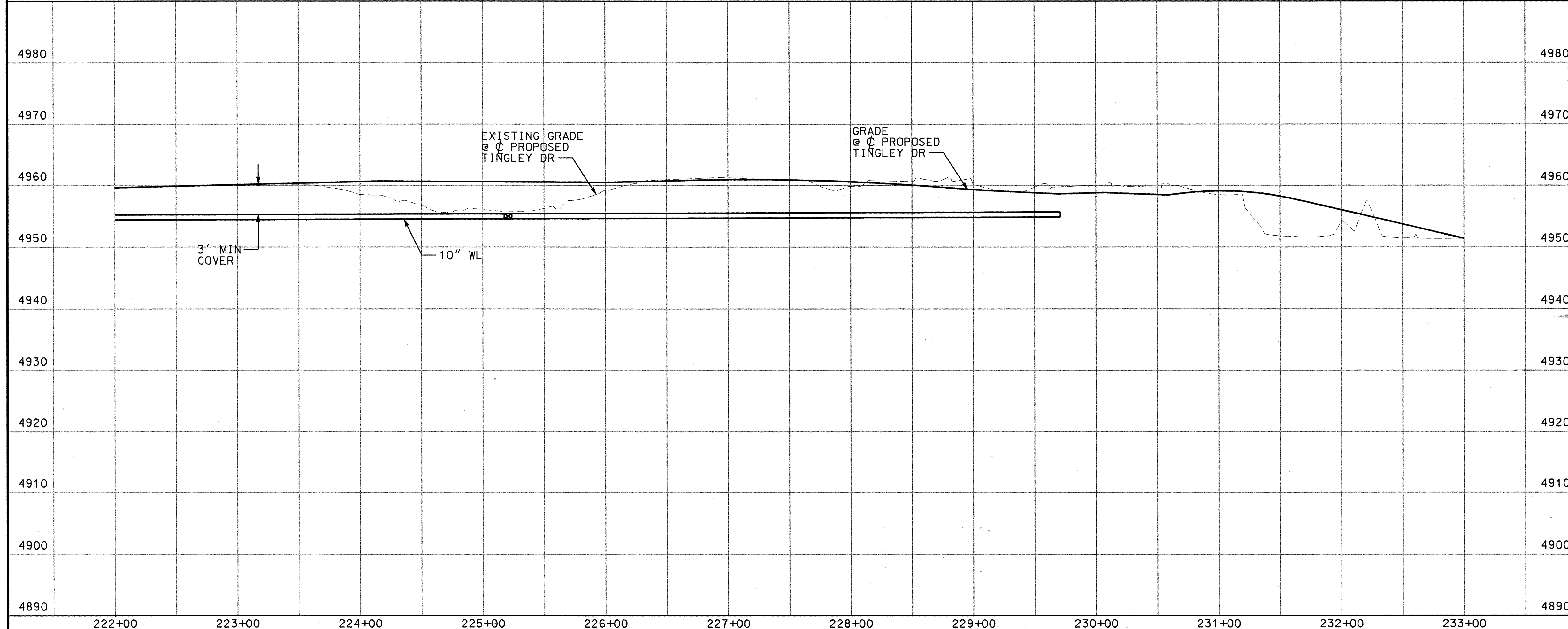
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
701192	12-J-13. K-13	32A	3	

RECORD DRAWING

SCANNED BY
MESA REPRO



AQUATIC PARK SANITARY SEWER AND WATER LINE



NOTES

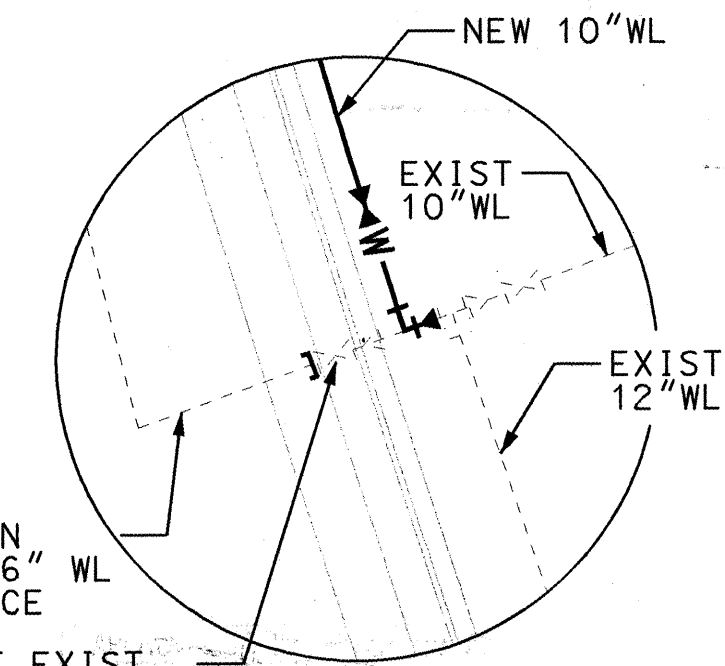
- CONTRACTOR NOT TO CREATE A HIGH POINT IN THE WATERLINE IN LAGUNA AND TINGLEY DRIVE. THE HIGH POINT SHALL OCCUR AT THE CONNECTION POINT IN CENTRAL AVENUE.
- CONTRACTOR TO COORDINATE WL REPLACEMENT IN CENTRAL AVE WITH CURB & GUTTER REPLACEMENT IN COA PROJECT NO. 701191 TO MINIMIZE IMPACT TO EXISTING PAVEMENT AND TRAFFIC.

RESTRAINING JOINT TABLE

MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	10"	12"
6"x6"x6" TEE	1	-	-
10"x10"x10" TEE	-	24	-
10"x6" REDUCER	-	42	-
12"x10" REDUCER	-	-	25
90° HORIZ BEND	18	28	-
45° HORIZ BEND	-	12	-
22.5° HORIZ BEND	-	6	-
11.25° HORIZ BEND	-	3	-
GATE VALVE/CAP	44	68	80

NOTE:

- ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE JOINTS WITHIN 20 LF OF MJ SHALL BE RESTRAINED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ABOVE (SEE NOTE 2 ABOVE).
- ALL CAPS SHALL UTILIZE PCC BLOCKING, UNLESS OTHERWISE NOTED.
- RESTRAINED LENGTH IS ON LARGE SIDE OF ALL REDUCERS.



DETAIL A
ADDENDUM #1

Bohannon & Huston
Courtyard 1 7500 Jefferson St NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

AQUATIC PARK SANITARY SEWER & WATER LINE
PLAN & PROFILE
STA 222+00 TO EOP

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.

LAST DESIGN UPDATE

CITY PROJECT NO. 701192

ZONE MAP NO. J-12, J-13, K-13

SHEET 33 OF 33

RECORD DRAWING