

FEBRUARY 2007

for the

P.O. BOX 1293
Albuquerque, New Mexico 87103

WATER RESOURCES

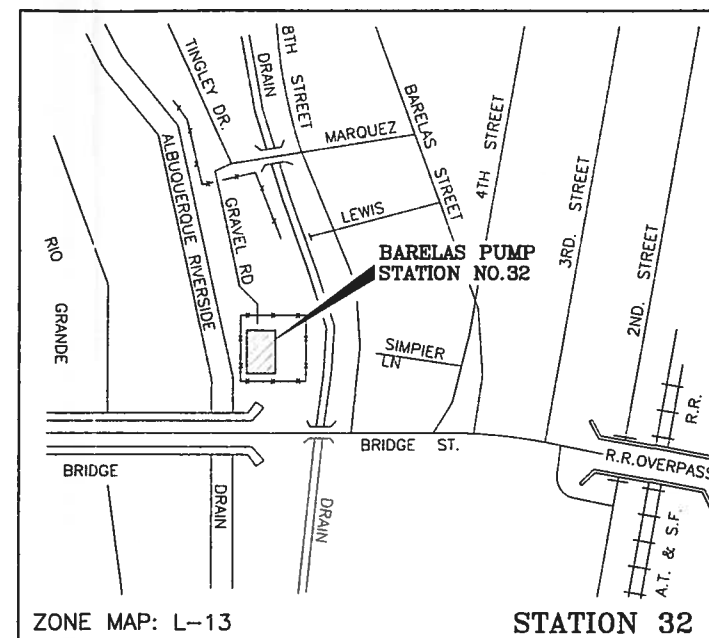
Molzen-Corbin & Associates
Kenneth R. Muller P.E.

ELECTRICAL ENGINEERS

Molzen-Corbin & Associates
Steven E. Sorenson P.E.

INDEX TO DRAWINGS:

SHEET	TITLE
GAB-001	PROJECT TITLE AND DRAWING INDEX SHEET
GAB-002	BARELAS PUMP STATION NO. 32 - SITE PLAN, GENERAL LAYOUT - RENOVATED
W01-101M	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, NEW BAR SCREEN - EQUIPMENT PLAN
W01-103M	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, CONVEYOR - EQUIPMENT PLAN AND SECTIONS
W01-301M	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, BAR SCREEN SECTIONS THRU INLET CHANNEL
W01-302M	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, BAR SCREEN SECTIONS THRU INLET CHANNEL
S01-001	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, STRUCTURAL DESIGN CRITERIA AND NOTES
S01-101	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, LOW LEVEL PLANS
S01-102	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, MID LEVEL PLANS
S01-103	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, HIGH LEVEL PLANS
S01-301	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, STRUCTURAL SECTIONS
S01-302	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, STRUCTURAL SECTIONS
S01-303	BARELAS PUMP STATION NO. 32 - MODIFICATIONS, STRUCTURAL SECTIONS AND DETAILS
E01-101D	BARELAS PUMP STATION NO. 32 - ELECTRICAL DEMOLITION PLAN
E01-101	BARELAS PUMP STATION NO. 32 - ELECTRICAL PLAN



LOCATION MAP

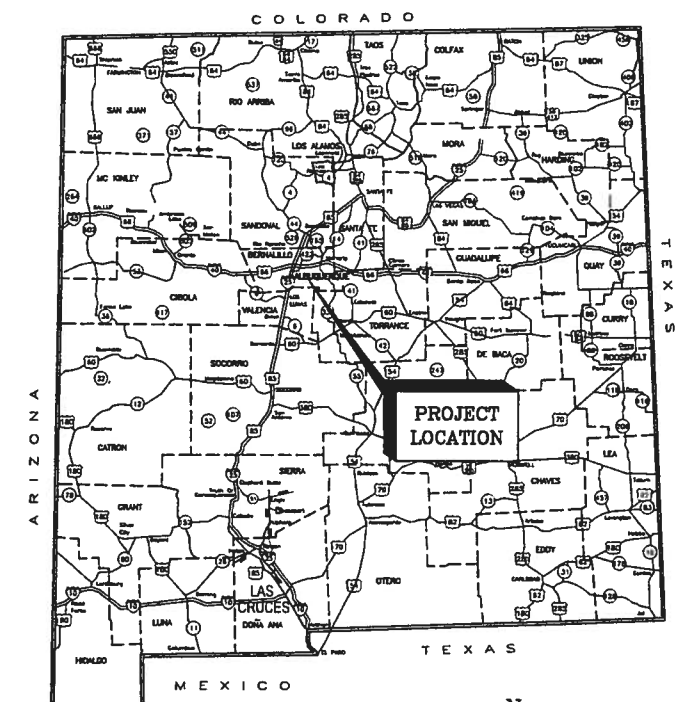
N.T.S.



2701 MILES RD SE
ALBUQUERQUE, NM 87106
TEL. 505 242-5700
FAX 505 242-0573

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

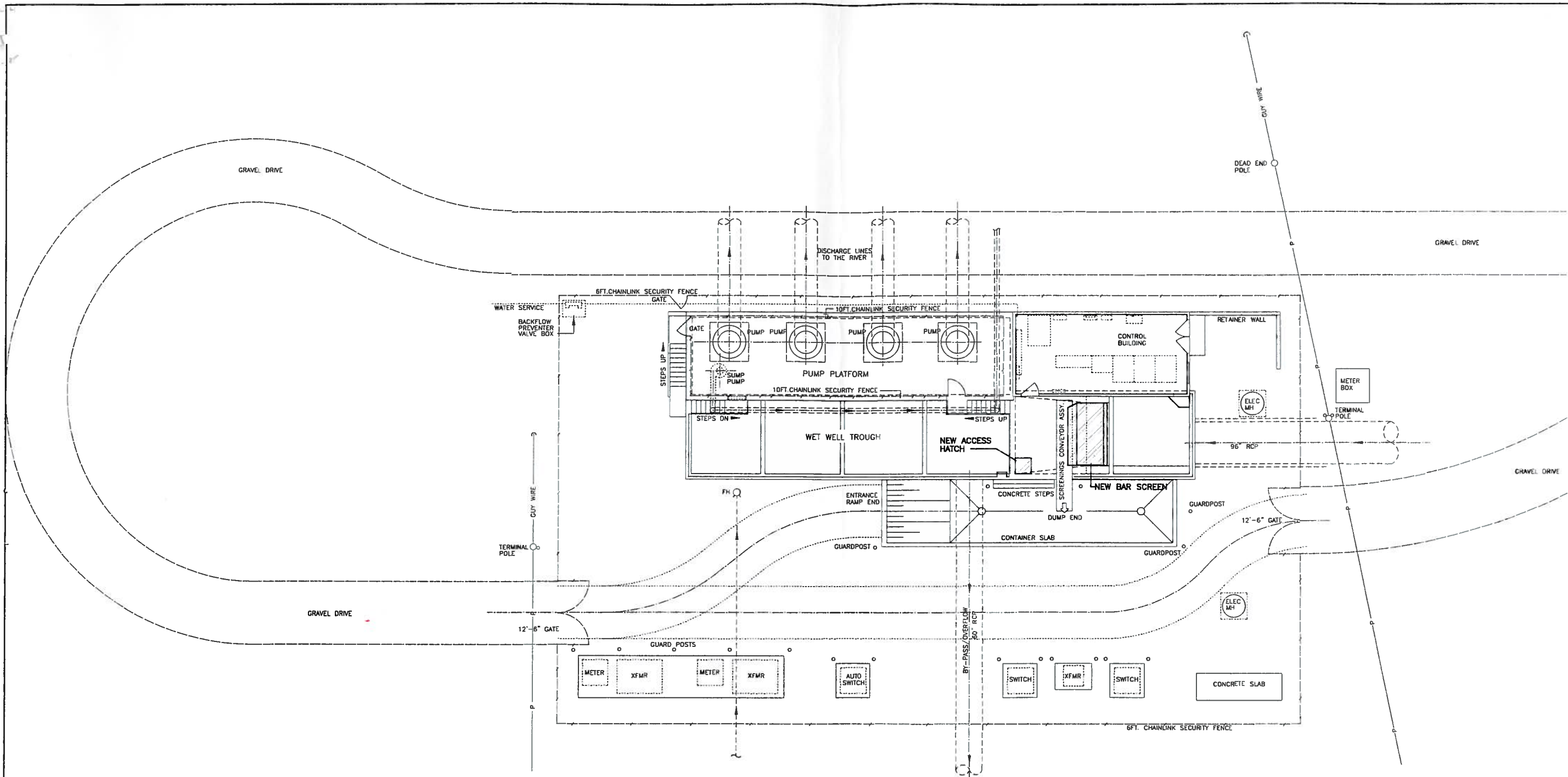
THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR THE CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.



VICINITY MAP

N.T.S

[illegible]



STATION NO.32 SITE PLAN
 SCALE: 1"=10'-0"

LEGEND:

= NEW STRUCTURES OR EQUIPMENT THIS PROJECT

SEE SHEETS W01-101M, W01-103M, W01-301M AND W01-302M FOR NOTES AND DETAILS

FOR ELECTRICAL MODIFICATIONS SEE ELECTRICAL DRAWINGS

0 2' 5' 10' 20'
 SCALE: 1"=10'-0"

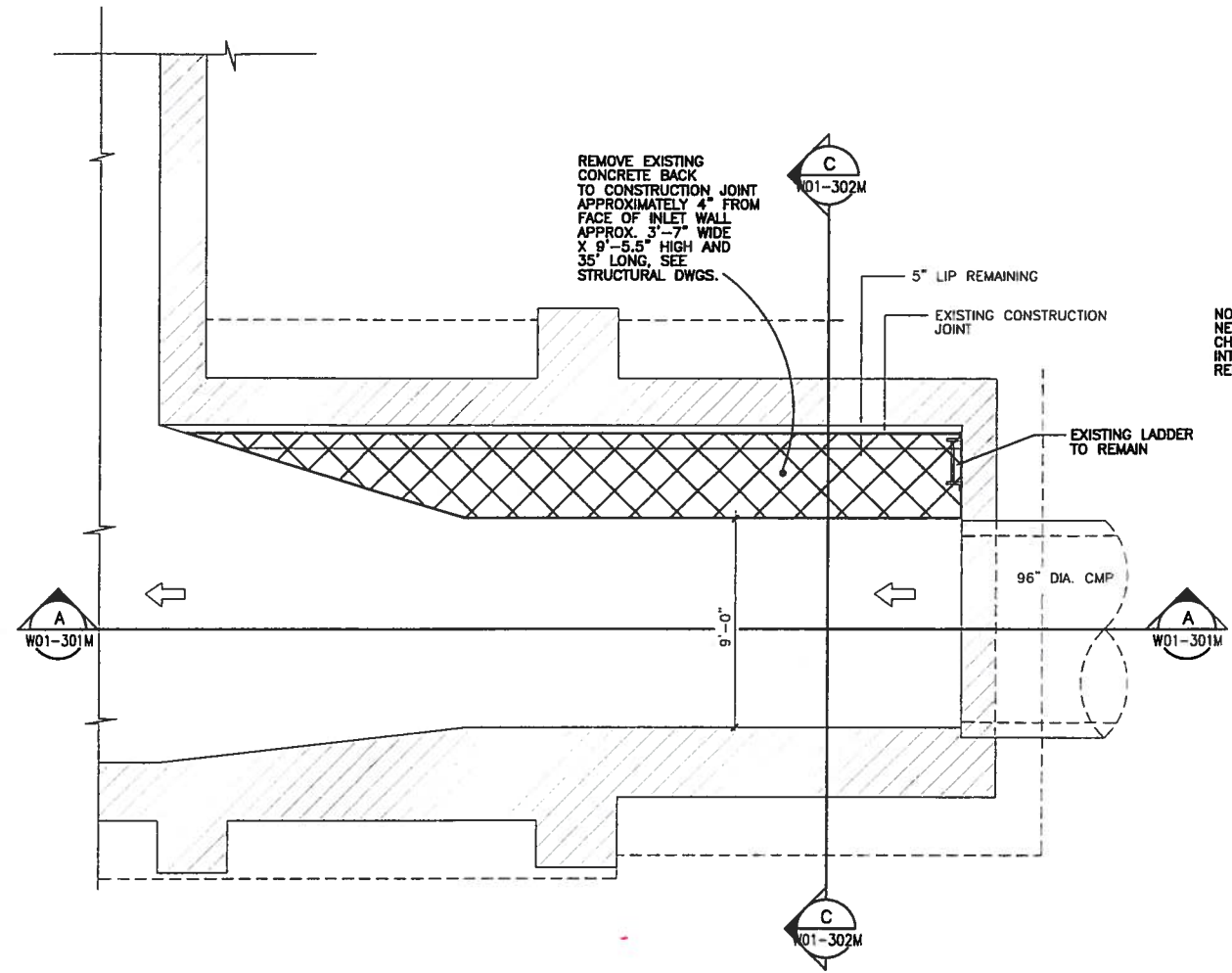
2701 MALES RD SE
 ALBUQUERQUE, NM 87106
 TEL: 505 242 5100
 FAX: 505 242 0871

MOLZEN-CORBIN & Associates
 ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - SITE PLAN GENERAL LAYOUT - RENOVATED	
Design Review Committee	City Engineer Approval
City Project No. 7953.01	Zone Map No. L-13
Sheet 01	GAB-002

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		FIELD NOTES					
BY		DATE					
REVISIONS							
DESIGN							
DESIGNED BY KM/RF		DATE FEB 2007					
DRAWN BY CJS		DATE 12-27-06					

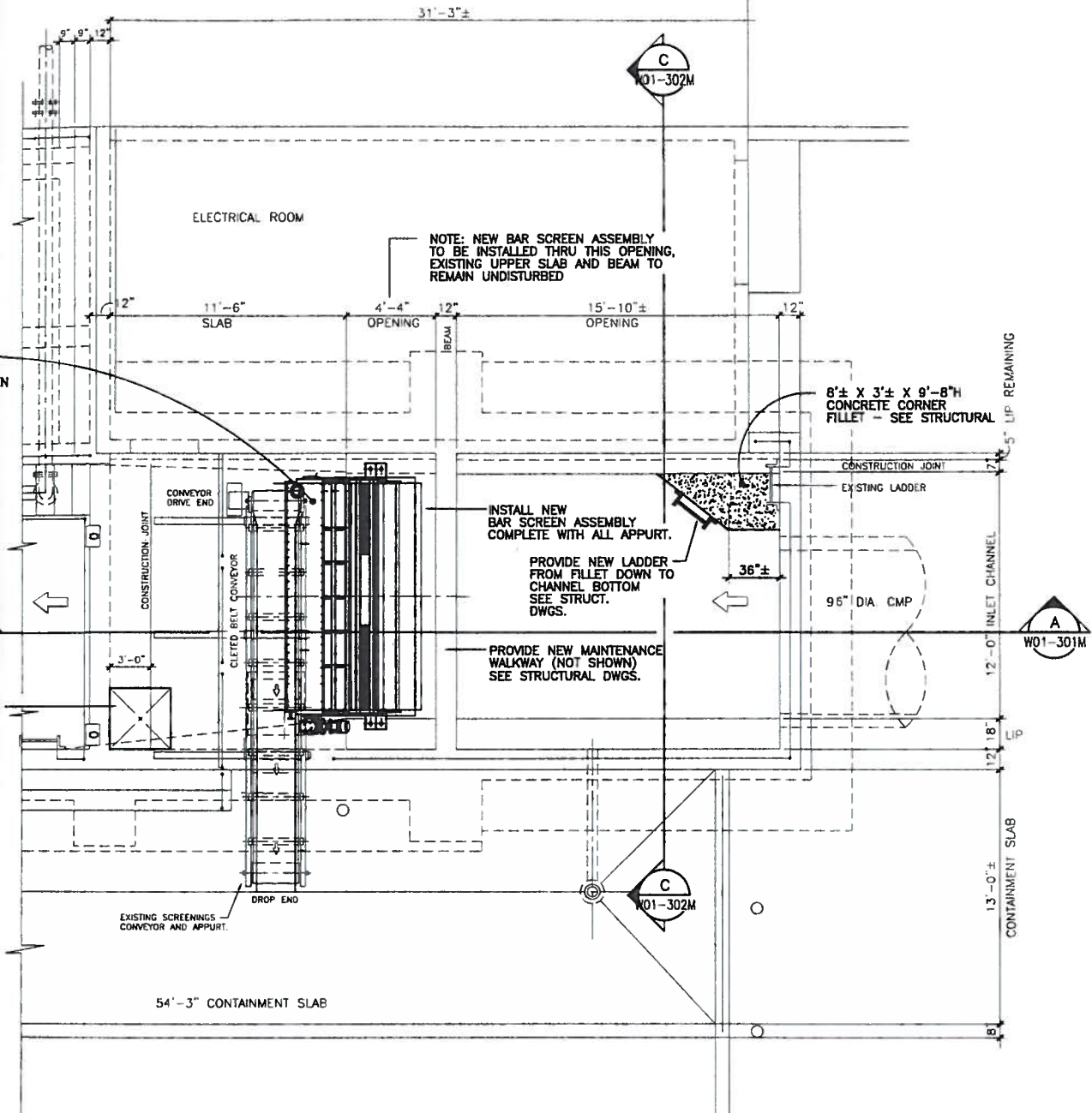
W01-101M 2/22/07 1:35:19



EXISTING & MODIFICATIONS
INLET CHANNEL LOWER LEVEL FOUNDATION PLAN
SCALE: 1/4"=1'-0"

NOTE: CONTRACTOR TO PROVIDE NEW SHEET METAL CHUTE TO CHANNEL DEBRIS FROM BAR SCREEN INTO CONVEYOR, FIELD VERIFY REQUIRED DIMENSIONS.

NEW HATCH AND LADDER SEE W01-103 AND W01-301 FOR DETAILS



NEW BAR SCREEN
UPPER LEVEL EQUIPMENT MODIFICATIONS-PLAN
SCALE: 1/4"=1'-0"

2701 ABILEE RD SE
ALBUQUERQUE, NM 87105
TEL: 505 243 5100
FAX: 505 241 0670

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS NEW BAR SCREEN - EQUIPMENT PLAN	
Design Review Committee	City Engineer Approval
Last Design Update	
City Project No.	Zone Map No.
7953.01	L-13
Sheet	01
W01-101M	

REVISIONS	
NO.	DATE

REMARKS	
BY	DATE

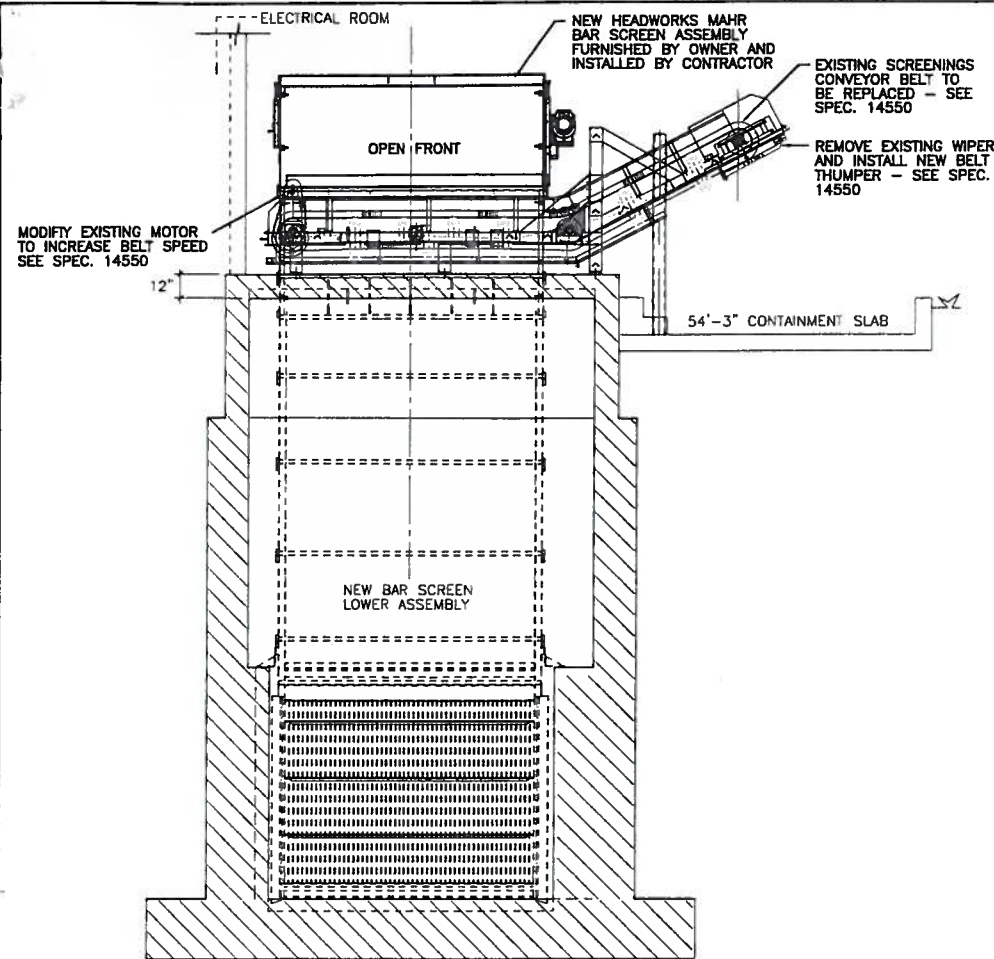
DESIGN	
DESIGNED BY	DATE
KM/RF/CJS	12-06
DRAWN BY	DATE
CJS	12-12
CHECKED BY	DATE
KU/DF	02-01-07

AS BUILT INFORMATION	
CONTRACTOR	DATE
BENCH MARKS	
	DATE

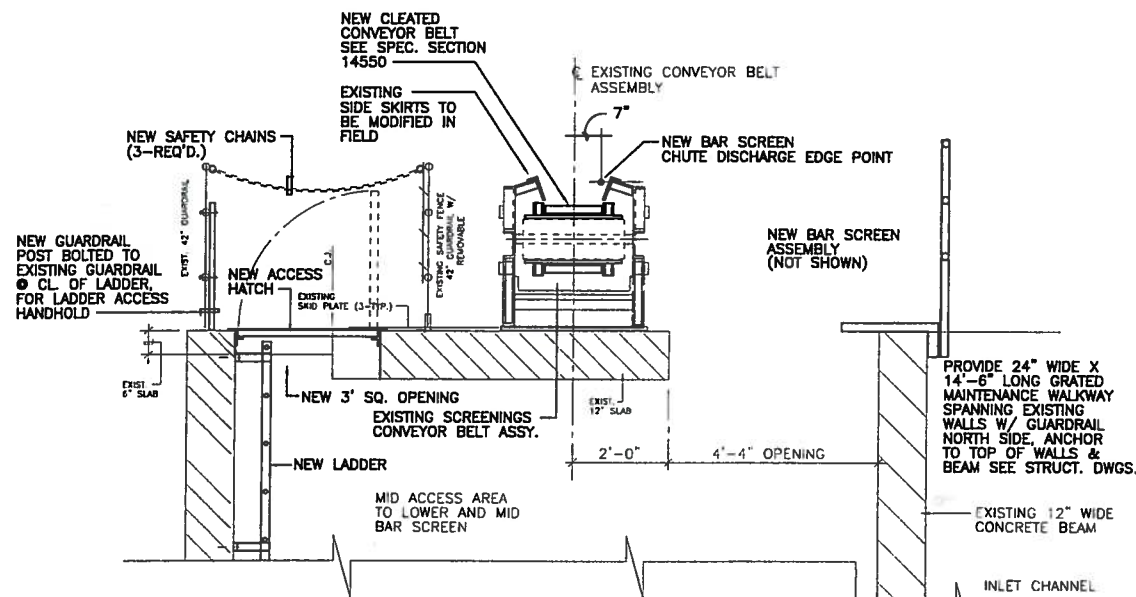
SURVEY INFORMATION	
FIELD NOTES	DATE

MICRO-FILM INFORMATION	
CONTRACTOR	DATE
BENCH MARKS	
	DATE

0' 1' 2' 4' 8'
SCALE: 1/4"=1'-0"



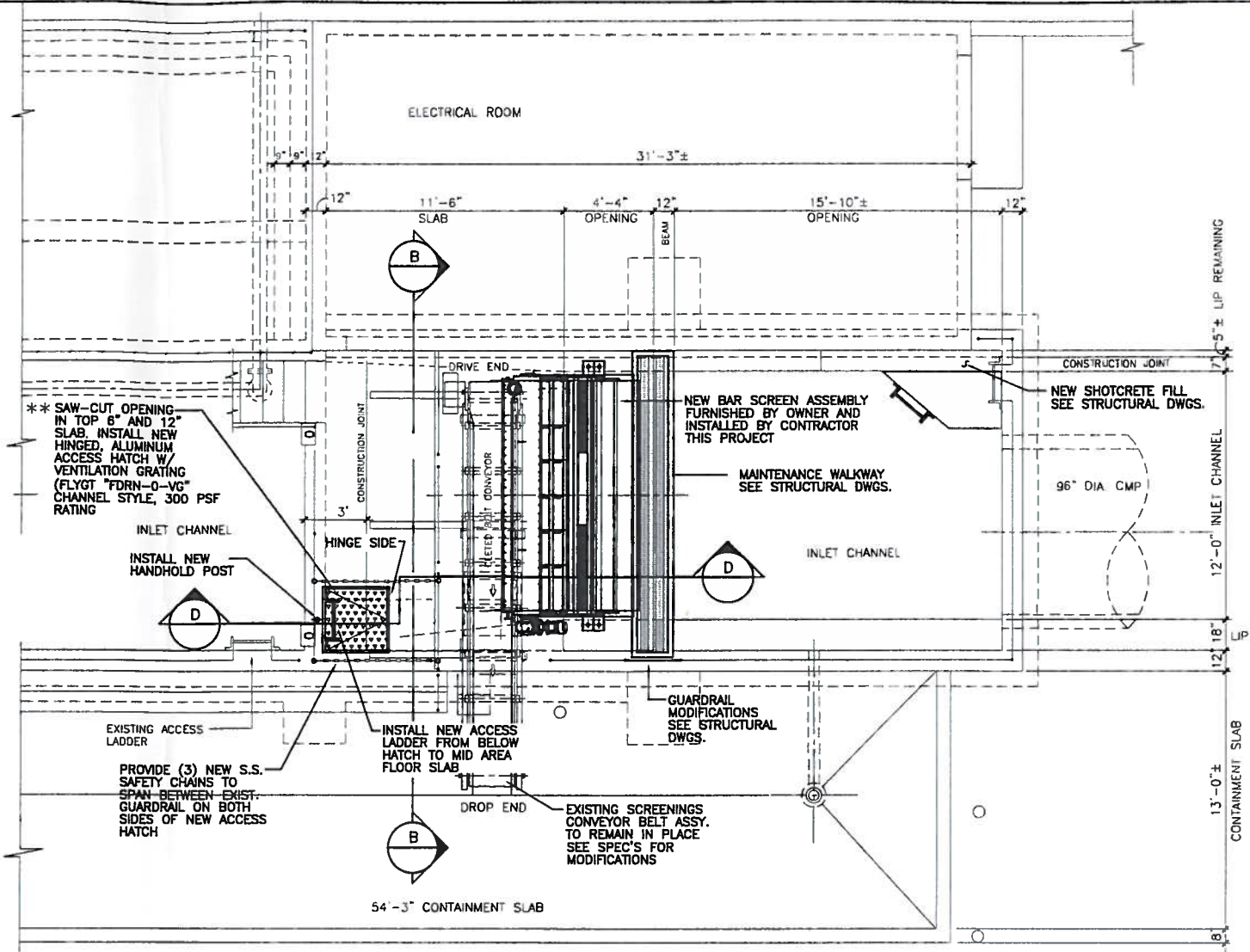
B NEW BAR SCREEN AT EXISTING SCREENINGS CONVEYOR - SECTION
SCALE: 1/4"=1'-0"



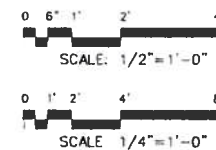
D NEW BAR SCREEN AT EXISTING SCREENINGS CONVEYOR - SECTION
SCALE: 1/2"=1'-0"

** SEE STRUCTURAL GENERAL NOTES ON SHT. S01-103

** SAW-CUT OPENING IN TOP 6" AND 12" SLAB, INSTALL NEW HINGED, ALUMINUM ACCESS HATCH W/ VENTILATION GRATING (FLYGT "FDRN-0-VG" CHANNEL STYLE, 300 PSF RATING)



SCREENINGS CONVEYOR/ACCESS LANDING & OPENING
UPPER LEVEL EQUIPMENT MODIFICATIONS-PLAN
SCALE: 1/4"=1'-0"



2701 MILES RD SE
ALBUQUERQUE, NM 87106
TEL: 505.242.5700
FAX: 505.242.0873

MOLZEN-CORBIN & Associates
ENGINEER/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS CONVEYOR - EQUIPMENT PLAN AND SECTIONS	
Design Review Committee	City Engineer Approval
City Project No. 7953.01	Zone Map No. L-13
Sheet L-13	Of W01-103M

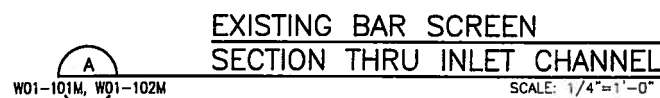
NO.	DATE	REMARKS	BY
1	12-06	DESIGN	KM/RF/CJS
2	12-12	REVISIONS	CJS

AS BUILT INFORMATION	
CONTRACTOR	DATE
INSPECTOR	DATE
FIELD ENGINEER	DATE
VERIFICATION BY	DATE
DESIGNED BY	DATE
RECORDED BY	DATE
NO.	

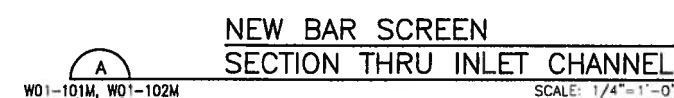
MICRO-FILM INFORMATION	
DATE	NO.
DATE	NO.
DATE	NO.
DATE	NO.
DATE	NO.
DATE	NO.


ENGINEER'S SEAL
Kenneth R. Muller
Professional Engineer
No. 12548
State of New Mexico

7.27.07



1. THE EXISTING BAR SCREEN WILL BE RE-INSTALLED AT THE BELL AND COMMERCIAL LIFT STATION NO. 37 UNDER A SEPARATE CONTRACT.
TRANSPORT ALL COMPONENTS OF THE EXISTING BAR SCREEN TO THE BELL AND COMMERCIAL LIFT STATION AND STORED AS DIRECTED BY THE OWNER.



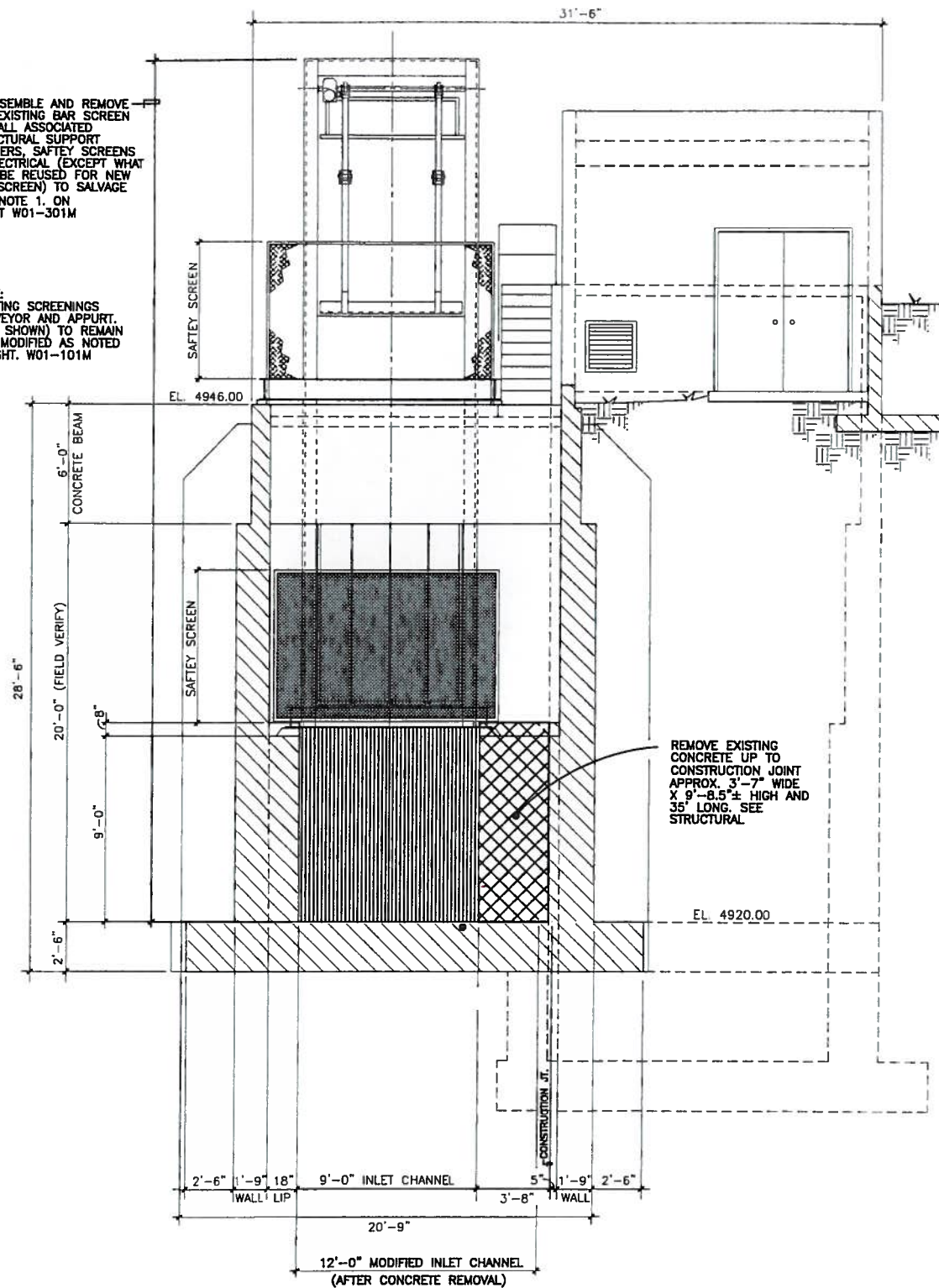
	CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT			
TITLE EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS BAR SCREEN SECTIONS THRU INLET CHANNEL				
Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	

[illegible]

W01-302M 2/22/07 3:35:19

DISASSEMBLE AND REMOVE THE EXISTING BAR SCREEN AND ALL ASSOCIATED STRUCTURAL SUPPORT MEMBERS, SAFETY SCREENS & ELECTRICAL (EXCEPT WHAT WILL BE REUSED FOR NEW BAR SCREEN) TO SALVAGE SEE NOTE 1 ON SHEET W01-301M

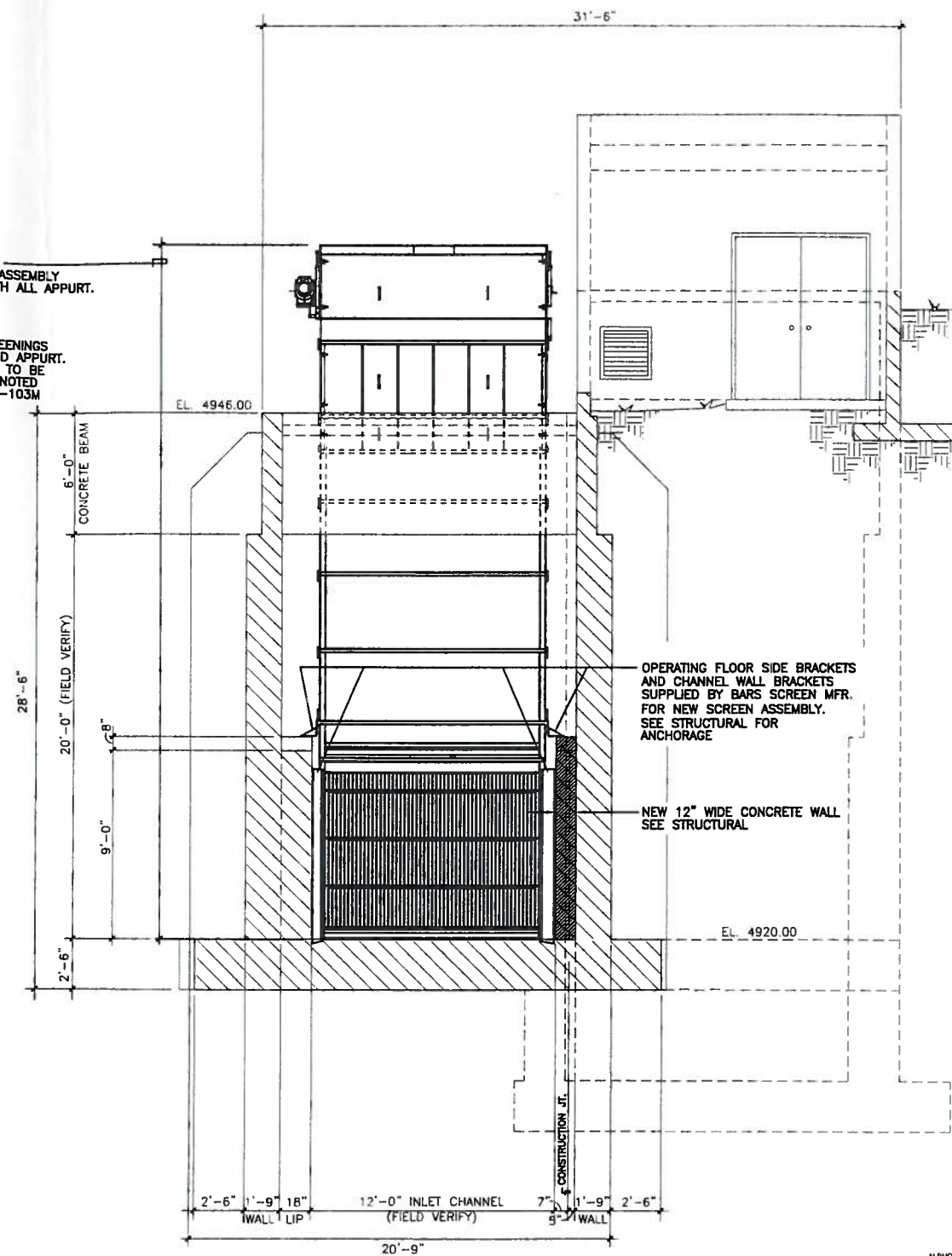
NOTE: EXISTING SCREENINGS CONVEYOR AND APPURT. (NOT SHOWN) TO REMAIN AND MODIFIED AS NOTED ON SHT. W01-101M



EXISTING BAR SCREEN
SECTION THRU INLET CHANNEL
W01-101M, W01-102M SCALE: 1/4"=1'-0"

INSTALL NEW BAR SCREEN ASSEMBLY COMPLETE WITH ALL APPURT.

NOTE: EXISTING SCREENINGS CONVEYOR AND APPURT. (NOT SHOWN) TO BE MODIFIED AS NOTED ON SHT. W01-103M



NEW BAR SCREEN
SECTION THRU INLET CHANNEL
W01-101M, W01-102M SCALE: 1/4"=1'-0"

0 1' 2' 4' 8'
SCALE: 1/4"=1'-0"

2701 ML/S RD 51
ALBUQUERQUE, NM 87106
TEL 505 242 5700
FAX 505 242 0672
MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS BAR SCREEN SECTIONS THRU INLET CHANNEL	
Design Review Committee	City Engineer Approval
City Project No. 7953.01	Zone Map No. L-13
Sheet 1	Of 1
W01-302M	

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
<div><div><div><div><div></div><div><div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></</div></div></div></div></div></div></div>							

STRUCTURAL DESIGN CRITERIA

BUILDING CODES

New Mexico Commercial Building Code (NMCBC) - 2003 edition
American Concrete Institute, ACI 350 - Code Requirements for
Environmental Engineering Concrete Structures, 2001 edition

VERTICAL LOADS

Use or Occupancy	Dead Load (1)	Live Load (1)
Grating	25 psf	100 psf

Notes:

- (1) Uniform load to be applied over the full tributary area of each structural member. Dead load includes weight of structure.

GENERAL REQUIREMENTS

- VERIFICATION.** Verify all dimensions, elevations and site conditions before beginning work. Notify Structural Engineer of any discrepancies. Beginning of work, or any succeeding phase of work shall be considered to be Contractor's certification that he has examined all conditions under which work is to be done and that he has found all conditions to be satisfactory.
- CONFLICTS AND QUESTIONS.** If there are conflicts between different parts of the drawings or between the Drawings and the Specifications or if the Contractor has any questions about the design documents, he shall issue a Request For Information (RFI) to the Contracting Officer requesting clarification. Work in the area in question shall not proceed until the RFI has been answered.
- SUBSTITUTIONS.** Do not make any substitutions without prior written approval. Provide manufacturer's approved product evaluation reports (ICBO reports) and a list of all proposed substitutions to Structural Engineer for review before fabrication.
- SIMILAR WORK.** Where construction details are not shown or noted for any part of the work, such details shall be the same as for similar work shown on the Drawings.
- SUBMITTALS AND REVIEW OF SUBMITTALS.** The Contractor shall schedule work and make submittals to allow adequate time for the review of submittals. The Contractor shall review all submittals before transmitting them to the Architect/Engineer for review. Submittals which have not been reviewed by the Contractor before being transmitted to the Engineer will be returned to the Contractor without review by the Engineer.
- PIPES, DUCTS, SLEEVES, CHASES, etc.** Do not place pipes, ducts, sleeves, chases or any similar items in slabs, beams, walls, or other structural elements without prior written approval. Do not cut structural element for installation of any item without prior written approval.
- PROTECTION OF EXISTING CONSTRUCTION.** Take all measures necessary to protect existing construction adjacent to new construction. Locate and protect underground or concealed conduit, plumbing, or other utilities where new work is being performed.
- CONSTRUCTION LOADS.** Distribute materials placed on roofs and framed floors evenly. Do not exceed the allowable loading for supporting members and their connections.
- CONSTRUCTION METHODS AND PRODUCT SAFETY.** Except where specifically noted otherwise, the contract Drawings and Specifications represent the finished structure and do not indicate methods, procedures or sequence of construction. Take necessary precautions to maintain and insure the integrity of the structure during construction. Neither the Owner nor the Engineer will enforce safety measures or regulations. The Contractor shall design, construct and maintain all safety devices, including shoring and bracing, and shall be solely responsible for conforming to and enforcing all local, state and federal health standards, laws and regulations.
- CHANGES TO THE STRUCTURAL DRAWINGS.** Not permitted without prior written approval from Structural Engineer.

STRUCTURAL MATERIALS

CONCRETE

Compressive strengths

USAGE	REQUIRED STRENGTH (psi)
Platform/Landing (Provide 6 standard 4"x8" cylinders to be tested, 3 at 7 days and 3 at 28 days)	4000 psi @ 28 days
Shotcrete See GENERAL NOTES - SHOTCRETE CONSTRUCTION on this sheet for testing requirements.	4000 psi @ 7 days

Cement: ASTM C150, type I low alkali or II low alkali
Fly Ash: ASTM C618, type F
Aggregates: ASTM C33, nominal 1" maximum
Air Entraining Agent: ASTM C260, entrained air 4 to 7% by volume
High Range Water Reducing Admixtures: ASTM C494, Type F
Set-Controlling Admixtures: ASTM C494, Type A, D or E
Nominal unit weight: 140 pcf
Minimum Weight of Cementitious Material: 470 lb/yd³
(portland cement plus 10%-25% flyash)
Maximum water/cementitious material ratio: 0.40
Slump (without superplasticizers): 1 to 4 inches

Conform to requirements of ACI 301 for curing and protection of concrete work.

Contractor shall submit mix designs and test data for review to the Engineer prior to start of concrete work. Both mix designs and test reports supporting mix design shall have been completed within the six month period preceding the first placement of concrete. At a minimum, the report shall contain the following:

- Identification of organization which prepared the mix design report.
- Identification of concrete class/compressive strength.
- Quantities of each material used in trial mix.
- Water/cementitious material ratio.
- Gradation of aggregates.
- Certifications that all materials meet project and appropriate ASTM Specifications.
- Show clearly on submittals which admixtures and quantity of admixture (if any) are to be used. Use all admixtures in strict compliance with manufacturer's directions.

CONCRETE REINFORCING

Typical Reinforcing Bars: ASTM A615, deformed, Grade 60

Welded Wire Fabric: ASTM A185, furnished in flat sheets

CONCRETE ACCESSORIES

Non-Shrink Grout: ASTM C1107, "Masterflow 928 Grout" by Master Builders or approved alternate
Epoxy Adhesive: ASTM C881 and suitable for use on dry or damp surfaces. "881 LPL Epoxy" by The Burke Company or approved alternate.
Bonding Agent: Polyvinyl acetate or acrylic base, rewettable type. "Everbond" by L&M Construction Chemicals or approved alternate.
Adhesive Anchors: "HYA" by Hilti, incorporated or approved alternate.

STRUCTURAL AND MISCELLANEOUS STEEL

Hot-rolled Channels, Angles and Plates: ASTM A36,
Fy = 36,000 psi
Pipe: ASTM A53, type E or S, grade B, fy = 35,000 psi
Galvanizing: ASTM A153 and ASTM A386
Stainless Steel: IFI-104, Grade 304

BOLTS, NUTS AND WASHERS

Steel-to-Steel Connections
Bolts: ASTM A325, tension control
Nuts: ASTM A563, grade C, heavy hexagonal
Washers: ASTM F436

Other
Bolts: ASTM A307, grade A, hexagonal heads
Nuts: ASTM A563, grade A, hexagonal
Washers: ASTM F436

GENERAL NOTES - EARTHWORK

GENERAL. Requirements for earthwork, including excavation, fill and backfill, unless specifically contained in these notes and the notes on the drawings shall be in accordance with the 2003 edition of the New Mexico Commercial Building Code.

SITE CLEARING. All vegetation and other organic matter, pavement, existing construction and man-made fill (except as otherwise directed), and any other unsuitable material shall be removed from site and properly disposed of.

EXCAVATION AND PROTECTION OF EXCAVATIONS. Remove existing material as required to meet site grading elevations. See the schematic details shown on the plan sheets for the extent of excavation and fill/backfill required at structures. Do not undercut existing construction. Provide positive surface drainage away from excavations and promptly remove any surface water which may enter the excavations. Remove any subgrade material and any previously placed fill or backfill which has been softened or otherwise damaged by moisture and replace with properly placed and compacted fill or backfill. Slope sides of excavations as required for slope stability and provide barricades, lights and warning signs as necessary for the protection of the public, construction personnel, and property.

PREPARATION OF SUBGRADE. After excavations have been completed and/or surface has been cleaned and grubbed, the subgrade shall be scarified, disced or otherwise loosened to a minimum depth of 8 inches, moistened or dried as necessary (to within + or - 2 percentage points of optimum moisture content) and compacted to not less than 95% of maximum density as determined by ASTM D1557.

FILL AND BACKFILL MATERIAL. All fill and backfill material shall be clean, non-plastic, non-cohesive, free of organic or frozen matter and any other unsuitable material, have a maximum size of 2 inches, and is to be approved by the Engineer before use. Site material may be used if it has the required properties; otherwise, imported material or a uniform mixture of site and imported material having the required properties shall be used.

PLACING AND COMPACTION OF FILL AND BACKFILL. Fill and backfill beneath and adjacent to the structure shall be placed in uniform layers not to exceed 8 inches in thickness before compaction and shall be compacted to not less than 95% of nominal maximum density. All compaction shall be performed when the material to be compacted is at its optimum moisture content (plus or minus 2 percentage points). If moisture must be added to the soil mass to be compacted, add required water and mix as necessary to achieve uniform moisture content. Compaction shall be performed using appropriate equipment and methods as necessary to achieve the required density percentages without damage to existing construction. Do not use ponding, flooding, jetting or similar methods to aid in compaction.

QUALITY CONTROL. Maximum densities and optimum moisture contents shall be determined in accordance with ASTM D1557. Density of in-place material shall be determined in accordance with ASTM D1556 or D2922. Gradations of materials shall be determined in accordance with ASTM D422. Liquid limits, plastic limits and plasticity indices shall be determined in accordance with ASTM D4318.

GENERAL NOTES - CONCRETE CONSTRUCTION

- GENERAL.** Unless otherwise shown or specified, supply and construct concrete in accordance with ACI 301 "Specifications for Structural Concrete for Buildings" and ACI 318 "Building Code Requirements for Structural Concrete". Except as otherwise shown, detail reinforcing in accordance with the latest edition of the ACI Detailing Manual and install in accordance with the latest edition of the CRSI Placing Manual.
- REINFORCING.** Hooks in reinforcing which are not otherwise detailed shall be standard ACI hooks. Splices in reinforcing which are not otherwise detailed shall be standard ACI Class B tension lap splices but splice lengths shall be not less than 24 inches.
- PLACEMENT OF REINFORCING AND OTHER ITEMS.** Reinforcing, dowels, bolts and any other inserts shall be fastened securely into position before concrete is placed. Drilled-in expansion anchors shall not be used except where specifically shown on the drawings. The spacings shown for reinforcing and other anchorage items are maximums. Provide and install install a sufficient number of items so that the spacings shown are not exceeded. The first and last items in a group of uniformly spaced items shall be located at not more than one-half of the typical spacing nor 12 inches from the end of a structural element.
- CONTINUITY OF VERTICAL REINFORCING.** No splices permitted except as shown. Provide dowels from footings into walls or columns at vertical bars in walls or columns. Except as otherwise shown, dowels shall have standard ACI 90 degree hooks at footings and vertical lengths of dowels shall be of sufficient length to provide ACI Class B Class B tension lap splices with vertical bars.
- CONTINUITY OF HORIZONTAL REINFORCEMENT.**
 - Footings, walls, turned-down slab edges: Bars shall be lapped not less than 32 bar diameters nor 24 inches. Except where bar lengths are given, reinforcing is to be continuous for full length or width of member less required concrete covers. Do not splice transverse footing bars. Additional reinforcing shall be intersections and other discontinuities as shown in the details on Sheet S01-102 and elsewhere on the drawings.
- CONSTRUCTION JOINTS.**
 - Slabs-on-grade: Construction joints shall be located where shown on the drawings except as otherwise approved by the Engineer.
 - Footings, walls, turned-down slabs: Construction joints shall be placed at locations to be selected by the Contractor subject to the following requirements. There shall be no construction joints within 5 feet of any corner or intersection. Construction joints in walls shall be offset from construction joints in footings by not less than 5 feet. Splices in reinforcing reinforcing shall not be located within 5 feet on any construction joint in the concrete. Horizontal and vertical keyways not less than 1-1/2 inches deep by 4 inches wide shall be provided at all joints in walls and footings.
 - Elevated slabs: Construction joints not permitted except as shown.
- EMBEDDED PIPES AND CONDUITS.** No pipes, conduits or any other items used by other trades except those shown on the Structural Drawings shall be embedded in concrete or pass through concrete members without the prior approval of the Engineer. See SPECIFICATIONS for additional requirements.
- CONCRETE COVER.** Provide concrete cover over reinforcing as noted below. Tolerance on position of reinforcing is plus or minus 3/8".
 - Concrete cast against and permanently exposed to earth: 3 inches
 - Concrete cast in forms but exposed to earth or weather in service: 2 inches
 - Concrete cast in forms but not exposed to earth or weather in service:
 - Walls and slabs: 1 inch.
 - Beams and columns.
 - Primary reinforcement: 2 inches.
 - Ties and stirrups: 1-1/2 inches.

GENERAL NOTES - SHOTCRETE CONSTRUCTION

- GENERAL.** Except as otherwise noted or shown, all SHOTCRETE CONSTRUCTION shall be in accordance with the CONCRETE CONSTRUCTION notes on this sheet and the notes, sections and details elsewhere on the Structural drawings, and the requirements contained in the current edition of American Concrete Institute Specification for Shotcrete (ACI 506.2). In the event of conflict any two or more of these documents, the order of precedence shall be the sections and details on the Structural drawings, followed by the requirements of ACI 506.2, followed by the CONCRETE CONSTRUCTION notes on this sheet, unless otherwise approved by the Structural Engineer.
- QUALITY ASSURANCE.**
 - Preconstruction Testing. Prior to beginning construction, each nozzleman shall prepare a test panel as specified in ACI 506.2. If, during the course of construction, new nozzlemen are proposed for use on the project, they shall also prepare a test panel.
 - Construction Testing. During the course of construction, each nozzleman shall prepare a test panel as specified in ACI 506.2 for each 50 cubic yards of shotcrete placed.
 - Shotcrete Core Grades. Specimens cut from test panels prepared and cured as specified in ACI 506.2 shall be acceptable only if they are Grade 1. If quality of cores is less than Grade 1, then the nozzleman who prepared the cores shall not be used to place shotcrete until he has demonstrated by the preparation of new test panels that he is capable of producing shotcrete of the required quality. Shotcrete in place which is represented by the substandard cores shall be removed and replaced unless repair procedures approved by with results acceptable to the Structural Engineer can be and are made.
- BATCHING AND MIXING.**
 - General. Use batching and mixing equipment capable of proportioning and mixing the required materials to produce shotcrete of the required quality.
 - Shoot dry-mix shotcrete within 45 minutes after batching or predampening.
 - Shoot wet-mix shotcrete material within 90 minutes after batching.
- SURFACE PREPARATION.** Prepare surface of earth, rock, concrete and forms against which shotcrete is to be placed as specified in ACI 506.2. Roughen and clean surfaces as specified, install reinforcing and apply bonding agent as required.
- FINISHES.** Finish surfaces of shotcrete to match surfaces of adjacent cast-in-place concrete except as otherwise directed by the Engineer.
- CURING.** Cure shotcrete by applying an approved curing compound or by continuous sprinkling for a period of not less than 7 days.
- PROTECTION.** Protect shotcrete from damage do to any source during the full life of the construction project. Repair any damaged areas as directed by and to the satisfaction of the Engineer. If in the opinion of the Engineer, satisfactory repairs can not be made, remove the damaged area without damaging existing construction and replace to the satisfaction of the Engineer.

STRUCTURAL ABBREVIATIONS

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
APPROX	Approximate	EXIST	Existing	NOM	Nominal	T.O.C.	Top of Concrete
BRG	Bearing	EXP	Expansion	N.T.S.	Not to Scale	T.O.S.	Top of Slab / Top of Sidewalk
BTM	Bottom	FNDN	Foundation	o/c	On Center	T.O.W.	Top of Wall
BTWN	Between	GA	Gage	OPNG	Opening	TRANSV	Transverse
CJ	Construction Joint	GALV	Galvanized	PL	Plate	TYP	Typical
CLR	Clear	HORIZ	Horizontal	pl	Pounds per Square Inch	U.O.N.	Unless Otherwise Noted
CONC	Concrete	H.S.B.	High Strength Bolt	REINF	Reinforcing	VERT	Vertical
CONST	Construction	JNT	Joint	REQD	Required	w/, w/o	With, Without
CONT	Continuous	L	Angle	SIM	Similar	W	Wide Flange (Beam)
DIW	Dimension	LLV	Long Leg Vertical	SLV	Short Leg Vertical	WWF	Welded Wire Fabric
DTL	Detail	LONGIT	Longitudinal	SQ	Square		
DWG	Drawing			STD	Standard		
DWL	Dowel			STL	Steel		
EA	Each	MAX	Maximum				
EQ	Equal	MIN	Minimum				
EQUIP	Equipment	MISC	Miscellaneous				

AS BUILT INFORMATION

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

ENGINEER'S SEAL

REVISIONS

DESIGN

BY

DATE

NO.

REMARKS

DESIGNED BY

DRAWN BY

CHECKED BY

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE



DATE

DATE

DATE

DATE

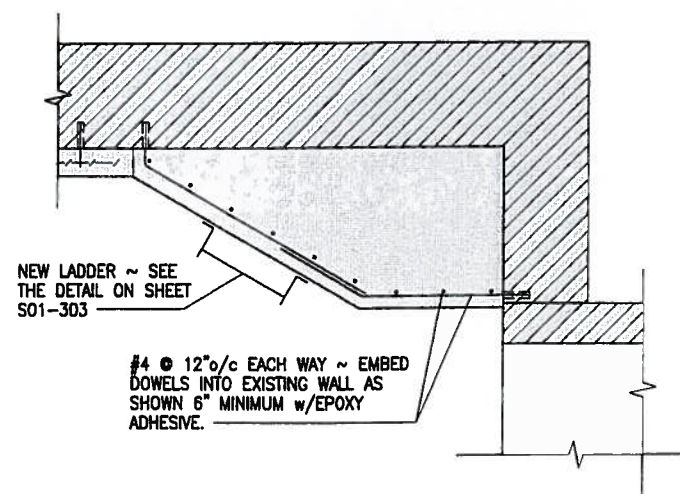
DATE

 Bacchus Consulting Engineering STRUCTURAL ENGINEERS Albuquerque	
2701 MILES RD SE ALBUQUERQUE, NM 87106 TEL: 505.242.5700 FAX: 505.242.0873	
 MOLZEN-CORBIN & Associates ENGINEERS/ARCHITECTS/PLANNERS	
CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS STRUCTURAL DESIGN CRITERIA AND NOTES	
Design Review Committee	City Engineer Approval
Mo./Day/Yr.	Mo./Day/Yr.
City Project No.	Zone Map No.
7953.01	L-13
Sheet	Of
	S01-001

LOW LEVEL DEMOLITION PLAN

LOW LEVEL STRUCTURAL PLAN

LOW LEVEL PLANS (ELEVATION 4920.0)



(A)






S01-101


SCALE: 1/2" = 1' 0"

GENERAL NOTES

1. Dimensions shown are based on record drawings of the exist.- Pump Station. Contractor shall verify and adjust dimensions as required for all submittals and/or work to be performed.
2. Prior to commencement of construction activities, Contractor shall inspect the existing structures for any signs of cracking or damage and submit the findings to the Engineer for record. Contractor shall take all precautions necessary during demolition activities to ensure no damage occurs to the existing structure to remain in place. Any damage which occurs to the existing structure due to improper demolition and/or construction techniques shall be repaired to the approval of the Engineer. All costs associated with the repair shall be the responsibility of the Contractor.
3. Contractor shall coat all exposed cut areas of concrete which will not receive new shotcrete or concrete fill. Coat exposed concrete using an epoxy sealer such as "L&M Construction Chemicals - Durathane HS/VOC" or an approved alternate.
4. Record drawings indicate that the portion of concrete designated to be removed is reinforced at the exposed sides with #4 at 12" o/c each way. During demolition, should any other reinforcing be encountered, stop demolition activities, notify engineer and await further instruction.
5. Prior to placement of new shotcrete/concrete, surfaces to receive new shotcrete/concrete shall be roughened using sand-blasting techniques or an approved method which will not jeopardize the structural integrity of the existing structure. Roughening shall be to approximately 1/4" amplitude. After roughening is completed, coat concrete with a concrete bonding agent such as "L&M Construction Chemicals - Everbond" or an approved alternate.

LEGEND

- | | |
|---|---|
|  | Edge of existing concrete foundation. |
|  | Existing concrete walls to remain. |
|  | Existing concrete to remove. See General Note #3. |
|  | Earth |
|  | New concrete/shotcrete fill structure. |

SCALE: 1/4" = 1' 0"  N



Bacchus
Consulting Engineering
STRUCTURAL ENGINEERS
Albuquerque

2701 MILES RD SE
ALBUQUERQUE, NM 87108
TEL: 505.242-5700
FAX: 505.242-0873



MOLZEN-CORBIN
& Associates
ENGINEERS/ARCHITECTS/PLANNERS



CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I
BARELAS PUMP STATION NO.32 - MODIFICATIONS

LOW LEVEL PLANS

Design Review Committee 	City Engineer Approval 	Last Design Update 	Mo./Day/Yr.	Mo./Day/Yr.
City Project No. 7953.01	Zone Map No. L-13	Sheet S01-101	Of 	

AS BUILT INFORMATION		MICRO - FILM INFORMATION	
CONTRACTOR		RECORDED BY	
WORK		DATE	
STARTED BY		DATE	
ACCEPTANCE BY		DATE	
FIELD		DATE	
EXAMINATION BY		DATE	
REMARKS		DATE	
SUBMITTED BY		DATE	

BENCH MARKS

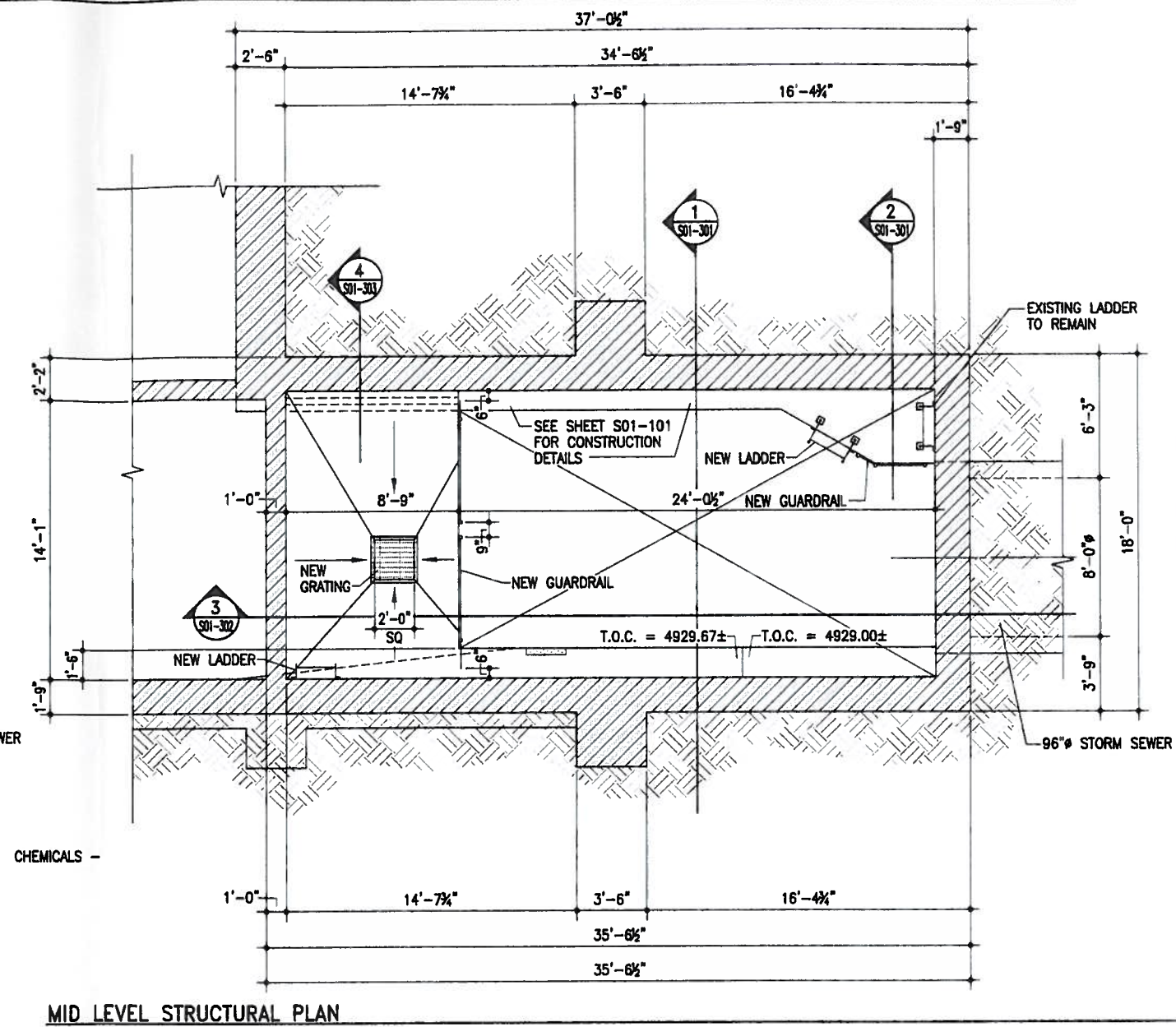
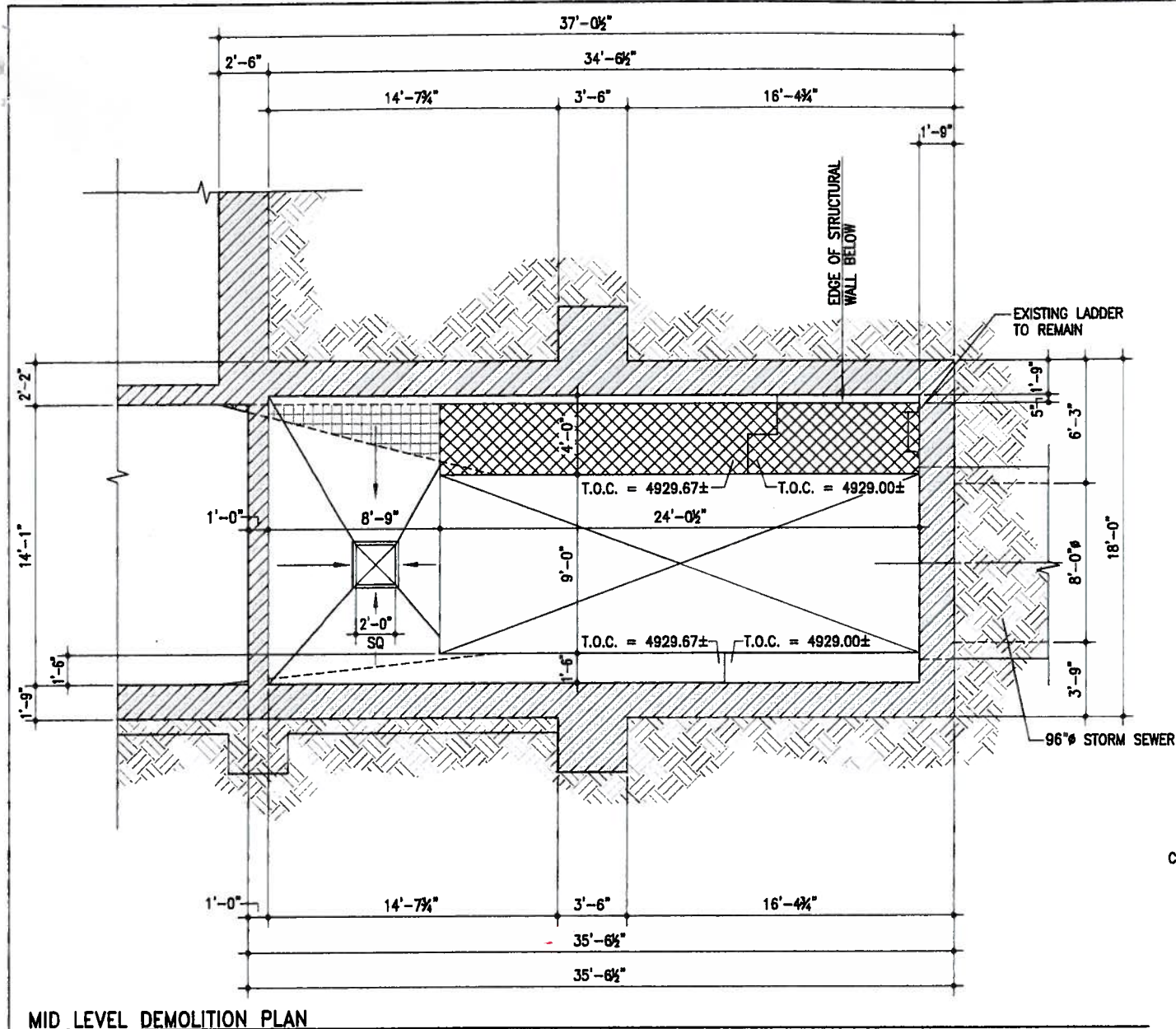
SURVEY INFORMATION
FIELD NOTES

ENGINEER'S SEAL



015870
7-22-07

DESIGNED BY		BCE		DATE	
DRAWN BY		BCE		DATE	
CHECKED BY		IW		DATE	
REVISIONS					
NO.	DATE	REMARKS		BY	









MID LEVEL PLANS (ELEVATION 4930.0±)

GENERAL NOTES

1. Dimensions shown are based on record drawings of the existing Pump Station. Contractor shall verify and adjust dimensions as required for all submittals and/or work to be performed.
2. Prior to commencement of construction activities, Contractor shall inspect the existing structures for any signs of cracking or damage and submit the findings to the Engineer for record. Contractor shall take all precautions necessary during demolition activities to ensure no damage occurs to the existing structure to remain in place. Any damage which occurs to the existing structure due to improper demolition and/or construction techniques shall be repaired to the approval of the Engineer. All costs associated with the repair shall be the responsibility of the Contractor.
3. Contractor shall coat all exposed cut areas of concrete which will not receive new shotcrete or concrete fill. Coat exposed concrete using an epoxy sealer such as "L&M Construction Chemicals - Durathane HS/VOC" or an approved alternate.
4. Record drawings indicate that the portion of concrete designated to be removed is reinforced at the exposed sides with #4 at 12"o/c each way. During demolition, should any other reinforcing be encountered, stop demolition activities, notify engineer and await further instruction.
5. Prior to placement of new shotcrete/concrete, surfaces to receive new shotcrete/concrete shall be roughened using sand-blasting techniques or an approved method which will not jeopardize the structural integrity of the existing structure. Roughening shall be to approximately 1/4" amplitude. After roughening is completed, coat concrete with a concrete bonding agent such as "L&M Construction Chemicals - Everbond" or an approved alternate.

LEGEND

	Existing concrete walls to remain.
	Existing concrete to remove. See General Note #3.
	Earth
	Existing concrete to remove ~ below. See General Note #3. Prior to removal of concrete, Contractor shall shore slab on the west end. Shoring shall remain in place until the new support angle has been installed and epoxy anchors have cured. See 4/S01-303.
	Provide new grating over existing opening. Grating shall be 1" thick minimum (field verify to match existing support embed) and shall be galvanized steel.
	Infill recess from old bar screen equipment using an approved patching compound such as "L&M Construction Chemicals - Durapatch VOH"

SCALE: $1/4" = 1' 0"$ N



2701 MILES RD SE
ALBUQUERQUE, NM 87106
TEL: 505.242-5700
FAX: 505.242-0871


MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS




TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I
BARELAS PUMP STATION NO.32 - MODIFICATIONS

MID LEVEL PLANS

Design Review Committee	City Engineer Approval	Last Design Update	No./Day/Yr.	No./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of	
7953.01	L-13		S01-102	

ENGINEER'S SEAL	SURVEY INFORMATION			BENCH MARKS	AS BUILT INFORMATION	
	FIELD NOTES					
	NO.	BY	DATE		CONTRACTOR	
					STARTED BY	DATE
					INSPECTOR'S	DATE
					ACCEPTANCE BY	DATE
					VEGETATION BY	DATE
					DRAINAGES	DATE
					CORRECTED BY	DATE
					MICRO-FILM INFORMATION	
					RECORDED BY	DATE
					NO.	

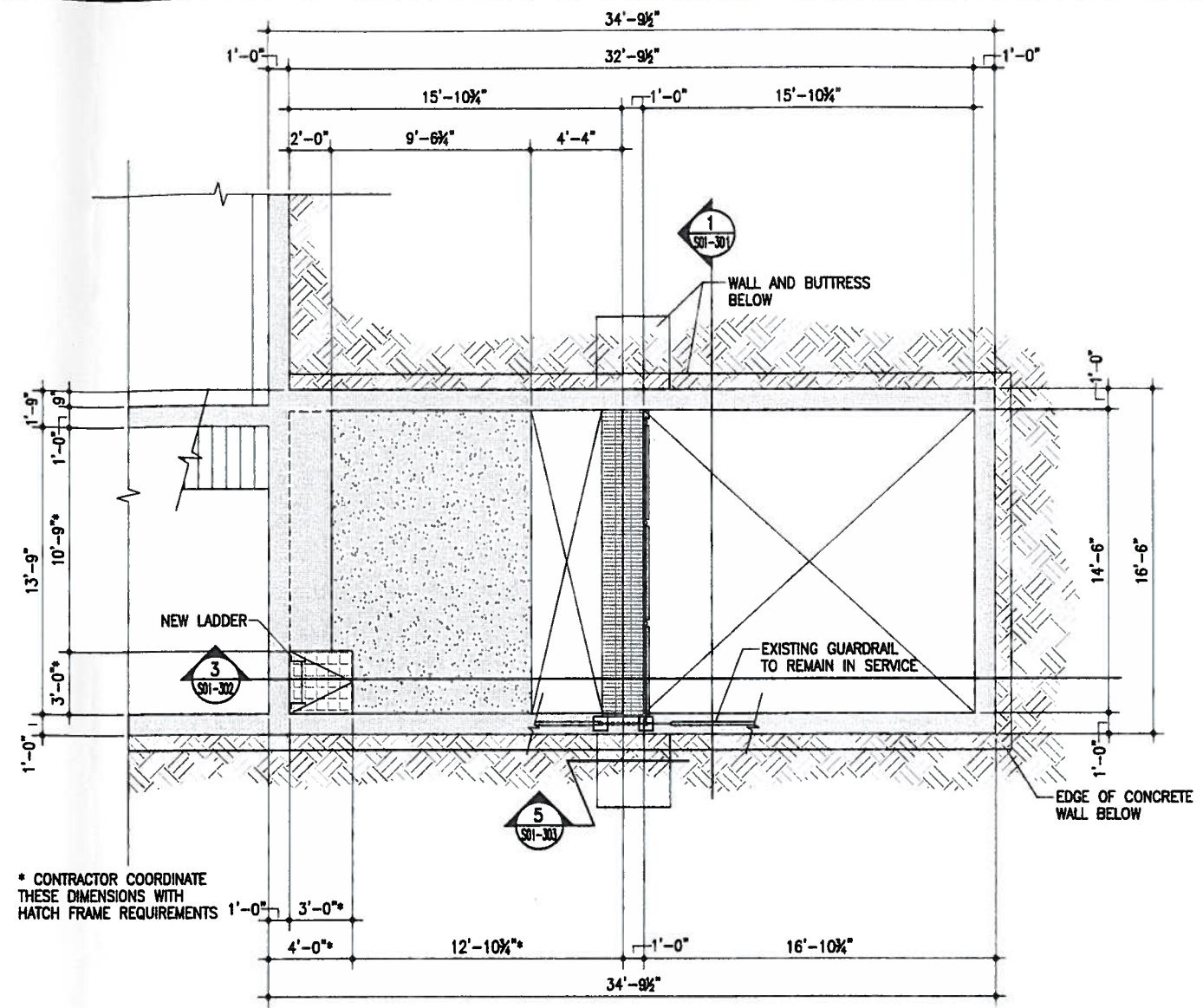
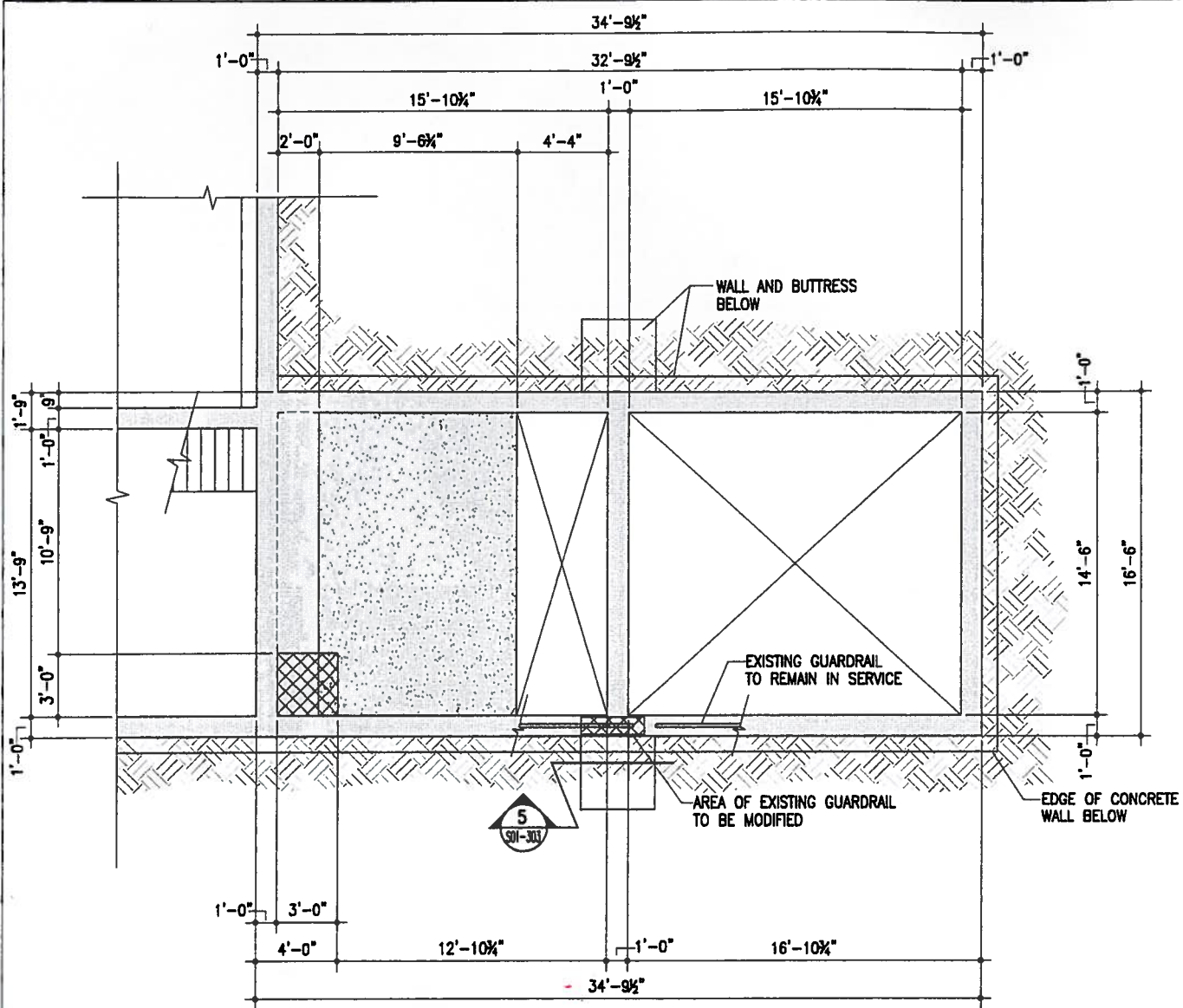


10-21-2020

60-22-20

FILE200/-001/S01-102.dwg 02/21/01 1/4" = 1' 0" © BACCHUS CONSULTING ENGINEERING

BCE-200/-001/S01-103.dwg 02/21/07 1/4" = 1' 0" © BACCHUS CONSULTING ENGINEERING



* CONTRACTOR COORDINATE THESE DIMENSIONS WITH HATCH FRAME REQUIREMENTS

HIGH LEVEL DEMOLITION PLAN

HIGH LEVEL STRUCTURAL PLAN

HIGH LEVEL PLANS (ELEVATION 4946.0)

GENERAL NOTES

1. Dimensions shown are based on record drawings of the existing Pump Station. Contractor shall verify and adjust dimensions as required for all submittals and/or work to be performed.
2. Prior to commencement of construction activities, Contractor shall inspect the existing structures for any signs of cracking or damage and submit the findings to the Engineer for record. Contractor shall take all precautions necessary during demolition activities to ensure no damage occurs to the existing structure to remain in place. Any damage which occurs to the existing structure due to improper demolition and/or construction techniques shall be repaired to the approval of the Engineer. All costs associated with the repair shall be the responsibility of the Contractor.
3. Contractor shall coat all exposed cut areas of concrete which will not receive new shotcrete or concrete fill. Coat exposed concrete using an epoxy sealer such as "L&M Construction Chemicals - Durathane HS/VOC or an approved alternate.

LEGEND

- Existing concrete walls to remain.
- Existing concrete to remove or existing guardrail to be modified. See General Note #3.
- Earth
- 12" concrete slab placed after initial construction of pump station. No construction drawings of slab are available.
- New grated walkway.
- New hatch cover over new opening in slab. See the Process Drawings for requirements. Connect to slab as required by hatch manufacturer and coat all exposed cut surfaces of concrete and required in general note #3.

SCALE: 1/4" = 1' 0" N

Bacchus Consulting Engineering
STRUCTURAL ENGINEERS
Albuquerque
2701 MILES RD SE
ALBUQUERQUE, NM 87106
TEL: 505.242-6700
FAX: 505.242-0873

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

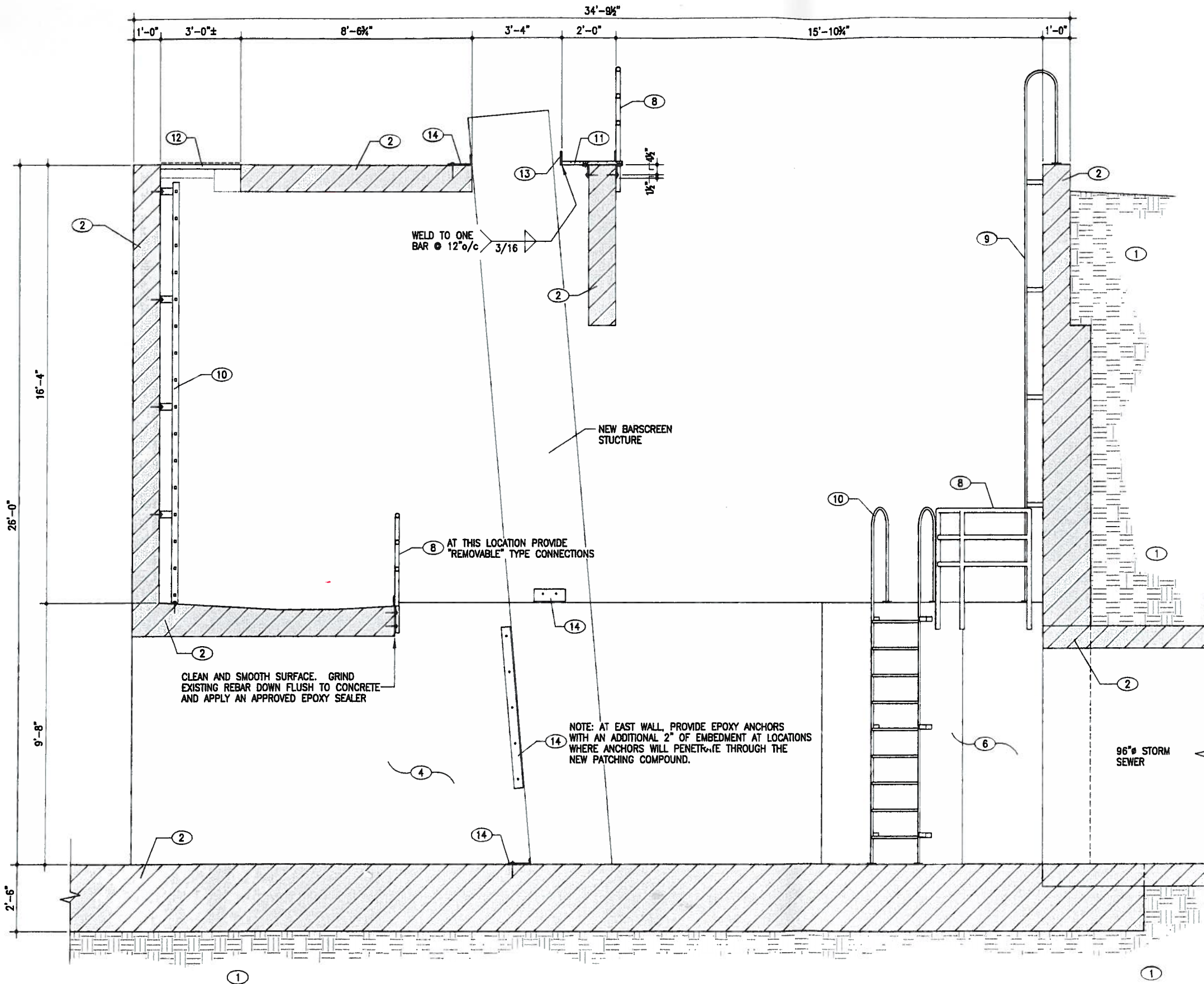
CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO.32 - MODIFICATIONS HIGH LEVEL PLANS	
Design Review Committee	City Engineer Approval
City Project No. 7953.01	Zone Map No. L-13
Sheet S01-103	Of

REVISIONS	DATE	BY

NO.	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
		BCE	BCE	DV

AS BUILT INFORMATION	
CONTRACTOR	DATE
INSPECTED BY	DATE
FIELD	DATE
VERIFICATION BY	DATE
COMMENTS	DATE

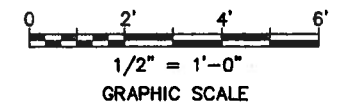
MICRO-FILM INFORMATION	
CONTRACTOR	DATE
INSPECTED BY	DATE
FIELD	DATE
VERIFICATION BY	DATE
COMMENTS	DATE



KEYED NOTES - STRUCTURAL SECTIONS

Note: In addition to the keyed notes, see the GENERAL NOTES on Sheet S01-001 for additional requirements.

- Earth in place.
- Existing pump station structure.
- Clean surface of existing structure to receive new shotcrete or concrete fill, roughen surface and apply an approved concrete bonding agent.
- New shotcrete fill, thickness and extents as shown on the drawings. Reinforce with 4x4-W4.0xW4.0 as shown. Connect to existing wall structure using #3 hooked bars embedded 6" minimum with epoxy adhesive. Hooks shall be spaced at 24" o/c horizontally and vertically. Finish to provide a smooth surface. Shotcrete shall be of sufficient strength to develop 4000 psi at 7 days.
- Provide 1 ~ #4 continuous at top of shotcrete fill.
- New concrete fill walkway, size as shown on the drawings. Reinforce with #4 @ 12" o/c each way at exterior face as shown. See sheet S01-101 for reinforcing plan detail and embed horizontals into existing concrete wall 4" minimum with epoxy adhesive. See the note on Section 1/S01-301 regarding drilling procedures.
- At top of new concrete landing, provide #4 transverse @ 12" o/c and 3 ~ #4 continuous as shown. Embed transverse bars into existing concrete structure 6" with epoxy adhesive.
- New guardrail system. See the PLANS for extents and the typical detail on sheet S01-303 for details.
- Existing ladder structure to remain in place.
- New ladder as shown. See the typical detail on Sheet S01-303 for details.
- 1-1/2" galvanized steel grating. Connect to existing concrete beam using continuous (between guardrail posts) L3x6x1/4 (LLV) on each side of concrete beam as shown. Provide saddle clips from grating to angles at 12" o/c max. Connect angles to concrete beam using 1/2" epoxy anchors w/ 4" embed (min) spaced at 12" o/c max. Alternate anchor locations on either side of beam.
- New hatch cover for new opening in slab. See the Process Drawings for hatch requirements. See the LEGEND on Sheet S01-103 for construction requirements.
- Continuous galvanized PL1/4x6 toe guard.
- New barscreen equipment support brackets by equipment manufacturer. Connect to supporting structure using 3/4" stainless steel epoxy anchors with 6" (min) embed.
- Continuous galvanized L4x4x3/8 slab support angle. Connect to existing wall using 1/2" epoxy anchors w/ 4-1/4" embed (min) spaced at 12" o/c. See the LEGEND on Sheet S01-102 for slab shoring requirements.



Bacchus
Consulting Engineering
STRUCTURAL ENGINEERS
Albuquerque

2701 MILER RD SE
ALBUQUERQUE, NM 87106
TEL: 800.242.6700
FAX: 800.242.0771

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS



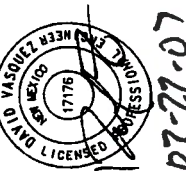
CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I
BARELAS PUMP STATION NO. 32 - MODIFICATIONS

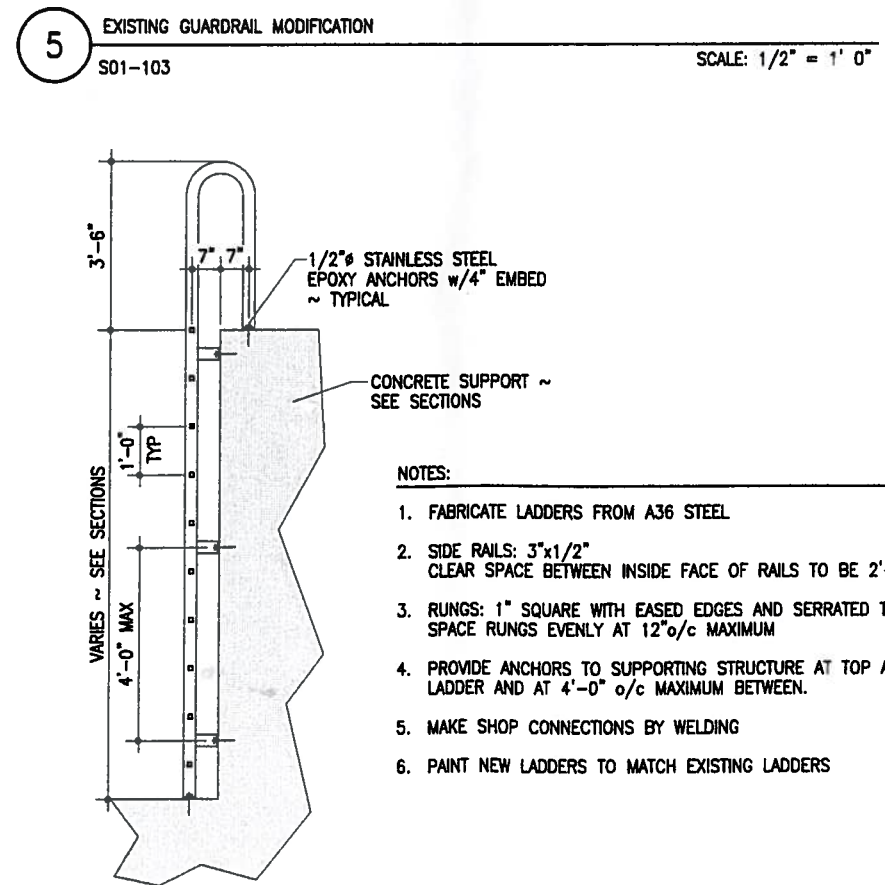
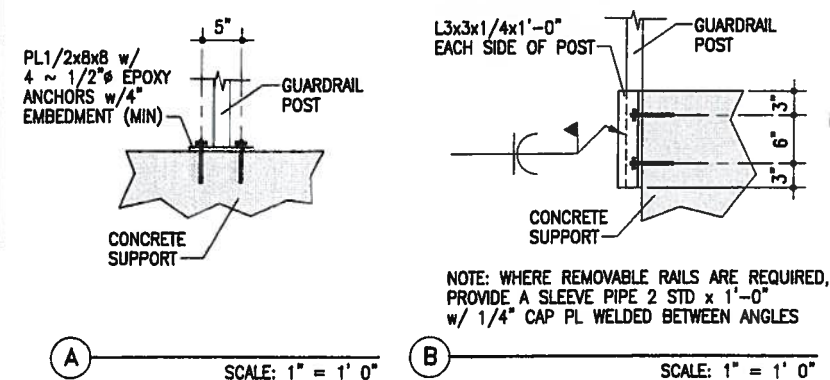
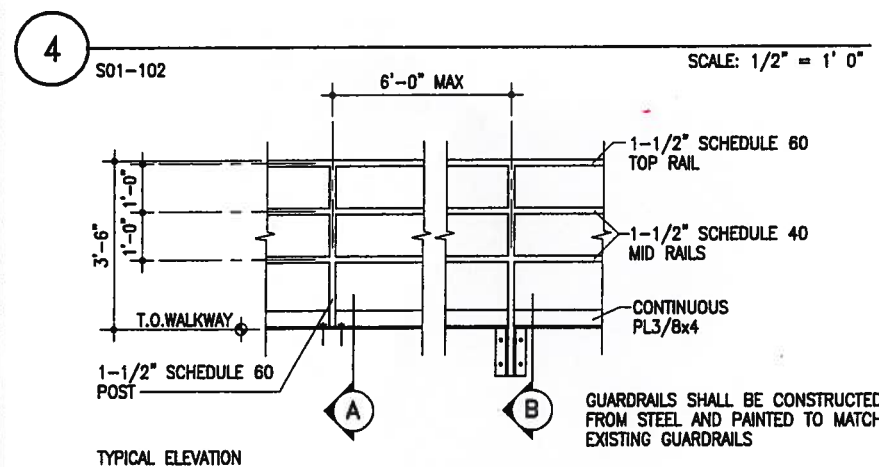
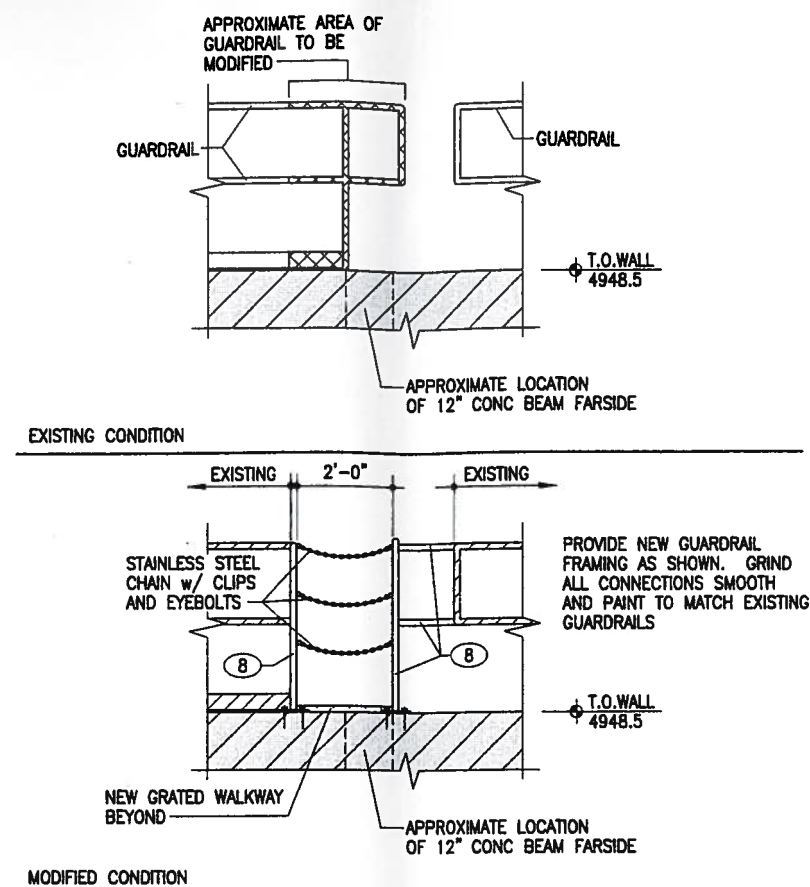
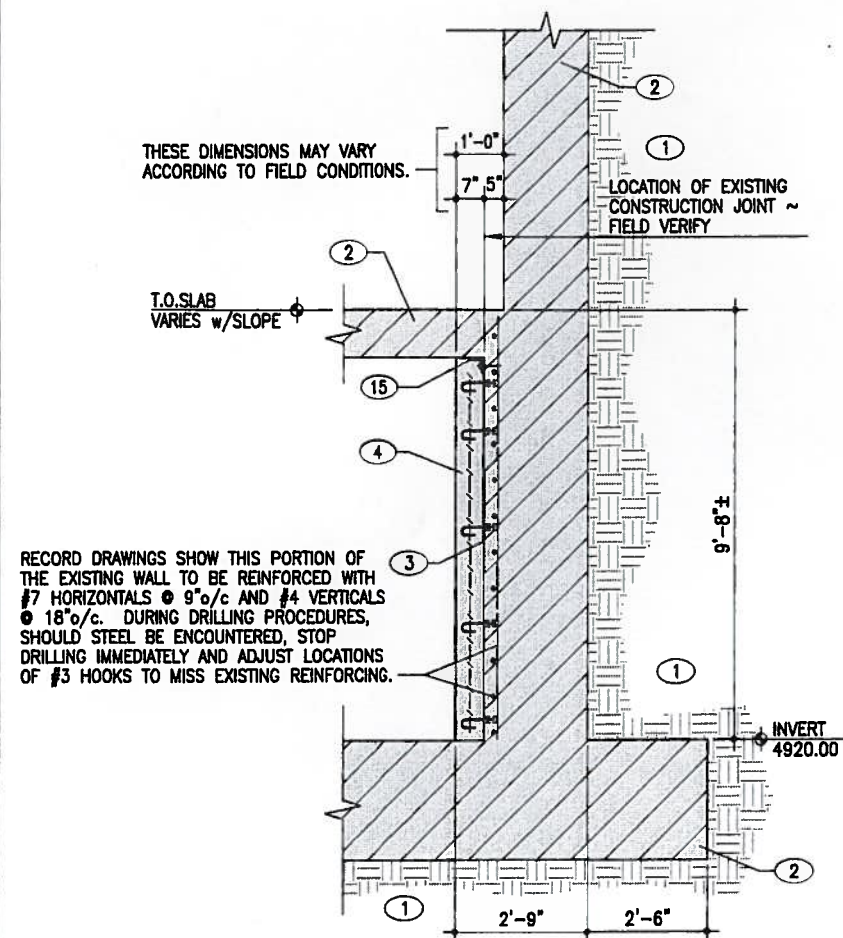
STRUCTURAL SECTIONS

Design Review Committee	City Engineer Approval	Last Design Update	No./Day/Yr.	No./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of	
7953.01	L-13	S01-302		

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	STATION	DATE	BY	DATE	NO.	DATE



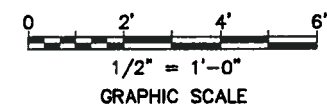
REVISIONS	DATE	BY
DESIGN		
DESIGNED BY	BCE	
DRAWN BY	BCE	
CHECKED BY	DV	



KEYED NOTES - STRUCTURAL SECTIONS


Note: In addition to the keyed notes, see the GENERAL NOTES on Sheet S01-001 for additional requirements.

- ① Earth in place.
- ② Existing pump station structure.
- ③ Clean surface of existing structure to receive new shotcrete or concrete fill, roughen surface and apply an approved concrete bonding agent.
- ④ New shotcrete fill, thickness and extents as shown on the drawings. Reinforce with 4x4-W4.0xW4.0 as shown. Connect to existing wall structure using #3 hooked bars embedded 6" minimum with epoxy adhesive. Hooks shall be spaced at 24" o/c horizontally and vertically. Finish to provide a smooth surface. Shotcrete shall be of sufficient strength to develop 4000 psi at 7 days.
- ⑤ Provide 1 ~ #4 continuous at top of shotcrete fill.
- ⑥ New concrete fill walkway, size as shown on the drawings. Reinforce with #4 @ 12" o/c each way at exterior face as shown. See sheet S01-101 for reinforcing plan detail and embed horizontals into existing concrete wall 4" minimum with epoxy adhesive. See the note on Section 1/S01-301 regarding drilling procedures.
- ⑦ At top of new concrete landing, provide #4 transverse @ 12" o/c and 3 ~ #4 continuous as shown. Embed transverse bars into existing concrete structure 6" with epoxy adhesive.
- ⑧ New guardrail system. See the PLANS for extents and the typical detail on sheet S01-303 for details.
- ⑨ Existing ladder structure to remain in place.
- ⑩ New ladder as shown. See the typical detail on Sheet S01-303 for details.
- ⑪ 1-1/2" galvanized steel grating. Connect to existing concrete beam using continuous (between guardrail posts) L3x6x1/4 (LLV) on each side of concrete beam as shown. Provide saddle clips from grating to angles at 12" o/c max. Connect angles to concrete beam using 1/2" epoxy anchors w/4" embed (min) spaced at 12" o/c max. Alternate anchor locations on either side of beam.
- ⑫ New hatch cover for new opening in slab. See the Process Drawings for hatch requirements. See the LEGEND on Sheet S01-103 for construction requirements.
- ⑬ Continuous galvanized PL1/4x6 toe guard.
- ⑭ New barscreen equipment support brackets by equipment manufacturer. Connect to supporting structure using 3/4" stainless steel epoxy anchors with 6" (min) embed.
- ⑮ Continuous galvanized L4x4x3/8 slab support angle. Connect to existing wall using 1/2" epoxy anchors w/ 4-1/4" embed (min) spaced at 12" o/c. See the LEGEND on Sheet S01-102 for slab shoring requirements.



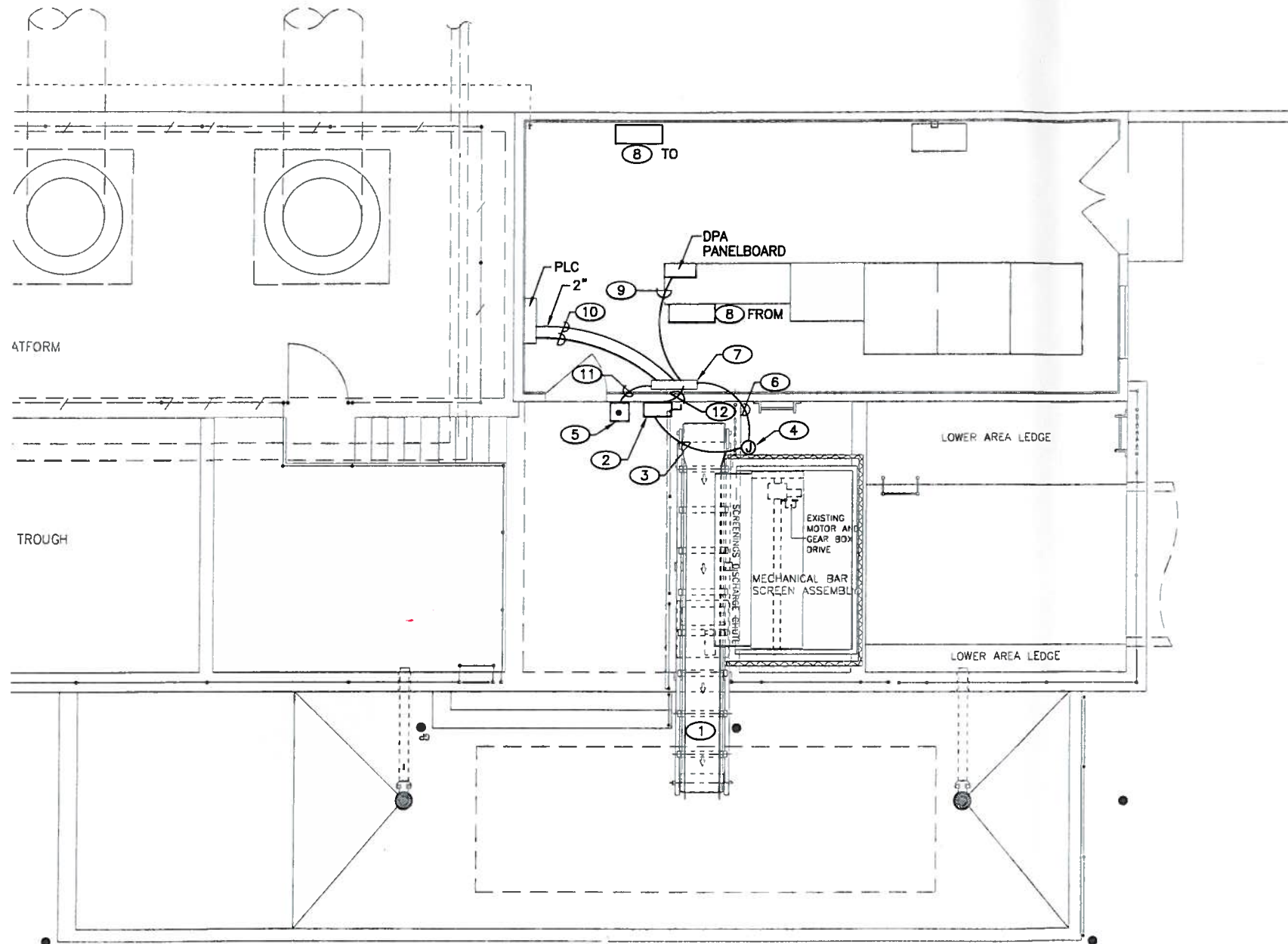
Bacchus
Consulting Engineering
STRUCTURAL ENGINEERS
Albuquerque

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

 CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

**TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I
BARELAS PUMP STATION NO.32 - MODIFICATIONS
STRUCTURAL SECTIONS AND DETAILS**

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of	
7953.01	L-13	S01-303		



ELECTRICAL DEMOLITION PLAN
SCALE: 1/4"=1'-0"



KEYED NOTES

- ① EXISTING CONVEYOR. DISCONNECT AND RECONNECT ELECTRICAL SO CONVEYOR CAN BE MOVED WHILE CHANGING SCREEN AND SO MODIFICATIONS TO THE CONVEYOR CAN BE DONE.
- ② EXISTING DISCONNECT SWITCH FOR SCREEN. REMOVE CONDUCTORS TO SCREEN CONTROL PANEL. REMOVE CONDUIT. REMOVE AND DISPOSE OF SWITCH.
- ③ REMOVE CONDUCTORS AND CONDUIT FROM DISCONNECT SWITCH TO BAR SCREEN.
- ④ JUNCTION BOX ON EXISTING SCREEN.
- ⑤ EXISTING CONTROL STATION FOR SCREEN. REMOVE. DISPOSE OF CONTROLS AND ENCLOSURE.
- ⑥ REMOVE CONTROL CONDUCTORS AND CONDUITS FROM SCREEN TO SCREEN CONTROL PANEL.
- ⑦ REMOVE EXISTING SCREEN CONTROL PANEL. DELIVER TO OWNER AT PROJECT SITE.
- ⑧ OWNER WILL RELOCATE STORAGE UNIT SO THERE WILL BE NEC REQUIRED ACCESS ROOM IN FRONT OF THE NEW CONTROL PANEL.
- ⑨ REMOVE POWER CONDUCTORS. DISCONNECT CONDUIT FROM EXISTING SCREEN CONTROL PANEL. PRESERVE PART OF CONDUIT FOR CONNECTION TO NEW SCREEN CONTROL PANEL.
- ⑩ REMOVE CONTROL CONDUCTORS BETWEEN THE EXISTING SCREEN CONTROL PANEL AND THE EXISTING STATION PLC ENCLOSURE. PRESERVE PART OF EACH CONDUIT FOR CONNECTION TO THE NEW SCREEN CONTROL PANEL. IF EXISTING 4 TWSH IN 2" CONDUIT CAN BE RE-USED FOR NEW CONTROL PANEL, DO SO, RATHER THAN REMOVING.
- ⑪ REMOVE CONTROL CONDUCTORS. REMOVE CONDUIT.
- ⑫ REMOVE POWER CONDUCTORS. REMOVE CONDUIT.

7731 MILES ROAD
ALBUQUERQUE, NM 87106
TEL: 505 242-5100
FAX: 505 242-0673

MOLZEN-CORBIN & Associates
ENGINEERS ARCHITECTS PLANNERS



CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I
BARELAS PUMP STATION NO. 32 - MODIFICATIONS
ELECTRICAL DEMOLITION PLAN

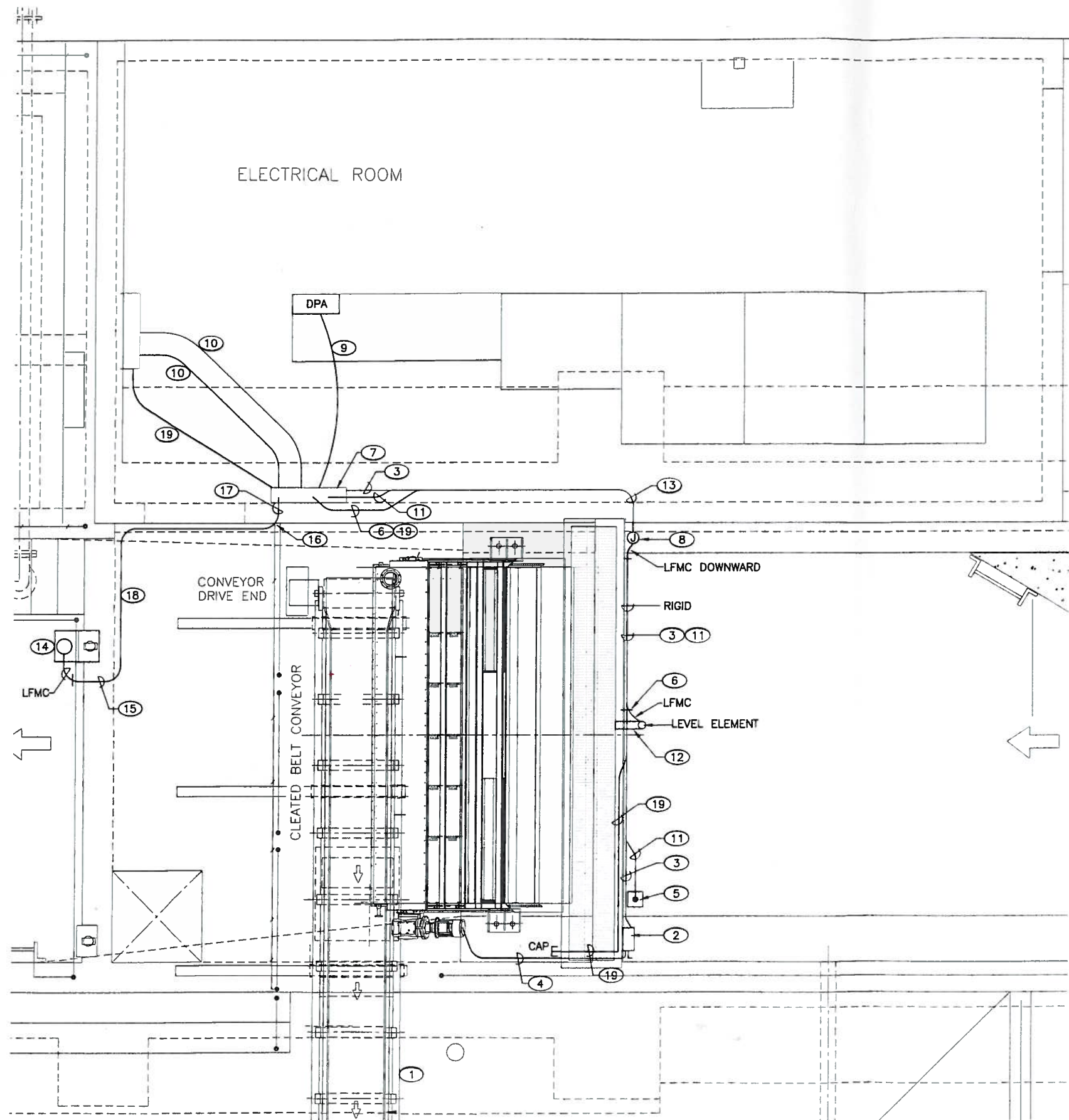
Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of
	L-13	E01-101D	



AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	BY	NO.	BY	NO.	DATE
STAKED BY	DATE						
INSPECTOR'S	DATE						
FIELD	DATE						
VERIFICATION BY	DATE						
DRAWINGS	DATE						
CORRECTED BY	DATE						
MICRO-FILM INFORMATION							
RECORDED BY	DATE						



REVISIONS	BY	DATE
DESIGN	SES	JAN 2007



BAR SCREEN UPPER LEVEL-ELECTRICAL PLAN
SCALE: 1/2"=1'-0"

KEYED NOTES

- ① RECONNECT ELECTRICAL TO CONVEYOR.
- ② INSTALL 30A 480V HEAVY DUTY NON-FUSED DISCONNECT SWITCH FOR SCREEN. ENCLOSURE: NEMA 4X SS. MOUNT STRUT ON BRIDGE SO THE FACE OF THE SWITCH IS FLUSH WITH THE GUARD RAIL.
- ③ 3/4 CONDUIT BETWEEN NEW SCREEN CONTROL PANEL AND NEW DISCONNECT SWITCH. RUN RIGID CONDUIT ON INSIDE OF ELECTRICAL ROOM WALL TOWARD NORTH, THEN THROUGH WALL TO JB. PROVIDE MAXIMUM 24 INCHES OF LFMC TO GET ONTO BRIDGE. RUN RIGID ON NORTH STRUCTURAL MEMBER OF BRIDGE. INSTALL AND CONNECT 3#10 AND 1 #10 GROUND.
- ④ 3/4 RIGID CONDUIT AND LFMC WITH 3#10 AND #10 GROUND CONDUCTORS FROM DISCONNECT SWITCH TO NEW BAR SCREEN. RUN CONDUIT DOWN FROM SWITCH, THROUGH HOLES (SEE STRUCTURAL DESIGN) IN NEW BRIDGE TO SOUTH, OUT OF BRIDGE, THEN EAST WITH LFMC, THEN RIGID ALONG THE INSIDE FACE OF THE CONCRETE WALL OF THE WET WELL, THEN LFMC TO SCREEN FRAME, THEN RIGID ON SCREEN FRAME, ATTACHED WITH BEAM CLAMPS, THEN LFMC TO SCREEN MOTOR. UNLIKE THE EXISTING SCREEN, THERE ARE NO CONTROL DEVICES (SUCH AS A PARKING SWITCH) ON THE NEW SCREEN.
- ⑤ NEW SCREEN CONTROL STATION - HOA, FWD-OFF-REV, AND E-STOP, FURNISHED BY SCREEN MANUFACTURER. MOUNT SIMILAR TO THE NEW DISCONNECT SWITCH.
- ⑥ 3/4 RIGID CONDUIT FOR CONNECTION OF NEW LEVEL TRANSMITTER ELEMENT. INSTALL SIMILAR TO SCREEN POWER CONDUIT. CABLE IS INTEGRAL TO THE LEVEL ELEMENT. RUN TO SCREEN CONTROL PANEL AND CONNECT.
- ⑦ INSTALL NEW SCREEN CONTROL PANEL, FURNISHED BY SCREEN MANUFACTURER.
- ⑧ 4 NEMA 4 HINGE COVER JB, ONE ABOVE THE OTHER, NORTH OF AND SLIGHTLY CLEAR OF THE GUARD RAIL OF THE BRIDGE. INSTALL NP ON EACH BOX: SCREEN POWER; SCREEN CONTROL; LE; FUTURE.
- ⑨ CONNECT CONDUIT TO NEW SCREEN CONTROL PANEL. INSTALL 3 #10 AND #10 GND. CONNECT. COLOR CODE CONDUCTORS.
- ⑩ CONNECT CONDUITS TO NEW SCREEN CONTROL PANEL. IN ONE CONDUIT INSTALL NEW 4 TWSH FOR CONTROLS. TWO ARE SPARE. CONNECT TO SCREEN CONTROL PANEL AS SHOWN ON SCREEN SUBMITTAL DRAWINGS. LABEL TO MATCH SCREEN TB POINTS. TEMPORARILY LABEL THE OPPOSITE END TO MATCH. OWNER WILL CONNECT IN THE EXISTING STATION PLC ENCLOSURE. INSTALL PULL STRING IN THE OTHER CONDUIT. IF IT IS POSSIBLE TO RE-USE 4 EXISTING TWSH DO SO RATHER THAN INSTALLING NEW TWSH.
- ⑪ RUN 3/4 CONDUIT TO NEW CONTROL STATION, SIMILAR TO SCREEN POWER CONDUIT. INSTALL #14 CONDUCTORS AND CONNECT TO SCREEN CONTROL PANEL AS SHOWN ON SCREEN SUBMITTAL DRAWINGS. LABEL ALL WIRE ENDS TO MATCH SCREEN TB POINTS.
- ⑫ INSTALL SS STRUT ONTO BRIDGE STRUCTURE. MOUNT ULTRASONIC LEVEL TRANSMITTER ELEMENT 16 INCHES CENTERLINE NORTH OF NORTH FACE OF EXISTING CONCRETE BEAM BELOW. BOTH LEVEL ELEMENTS ARE PROVIDED BY THE SCREEN MANUFACTURER.
- ⑬ CORE DRILL WALL 4 PLACES. INSTALL CONDUIT. INSTALL SILICONE SEALANT.
- ⑭ FABRICATE SS STRUT FRAME TO SUPPORT LEVEL ELEMENT 16 INCHES AWAY FROM WALL. WELD ONTO EXISTING ANCHOR FOR WINCH.
- ⑮ CORE DRILL WALL FROM INSIDE, AS HIGH AS PRACTICAL.
- ⑯ CORE DRILL DECK, AS CLOSE TO MCC ROOM WALL AS PRACTICAL. SEAL.
- ⑰ USE AN EXISTING WALL PENETRATION. SEAL AROUND CONDUIT. SEAL OTHER, UNUSED PENETRATIONS.
- ⑱ RUN 3/4 RIGID FROM LEVEL ELEMENT TO SCREEN CONTROL PANEL. CABLE IS INTEGRAL TO THE LEVEL ELEMENT. RUN TO SCREEN CONTROL PANEL AND CONNECT.
- ⑲ INSTALL SPARE 1" CONDUIT.

2781 MILES RD SE
ALBUQUERQUE, NM 87106
TEL: 505 242-5700
FAX: 505 242-0873

MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT	
TITLE: EMERGENCY STORM WATER PUMP STATION IMPROVEMENTS PHASE I BARELAS PUMP STATION NO. 32 - MODIFICATIONS ELECTRICAL PLAN	
Design Review Committee	City Engineer Approval
City Project No.	Zone Map No.
Sheet	Of
E01-101	

NO.	DATE	REVISIONS	BY
		DESIGN	
DESIGNED BY	SES	DATE	JAN 2007

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	STAKED BY	DATE	FIELD NOTES	BY	NO.	DATE
INSPECTED BY	DATE	ACCEPTANCE BY	DATE				
VERIFICATION BY	DATE	DRAWINGS	DATE				
CORRECTED BY	DATE						
MICRO-FILM INFORMATION							
RECORDED BY	DATE						

ENGINEER'S SEAL: *[Signature]*
STEVEN E. SORESEN, P.E.
NEW MEXICO
6570
REGISTERED PROFESSIONAL ENGINEER