SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

TITLE SHEET
FOR CONSTRUCTION PLANS OF
WEST STATE STREET STORM DRAIN
CITY OF MONTCLAIR, CITY OF ONTARIO AND
THE UNICORPORATED AREA OF THE COUNTY OF SAN BERNARDINO
SEGMENT III B & C
BETWEEN CENTRAL AVENUE TO MOUNTAIN AVENUE
F01087
SAN ANTONIO CREEK SYSTEM

SEGMENT III B
BETWEEN CENTRAL AVENUE TO MOUNTAIN AVENUE
26 SHEETS

SEGMENT III C
TRANSITION STRUCTURES AT BENSON AVENUE AND MOUNTAIN AVENUE
15 SHEETS

P&D Consultants, Inc.
1400 North Wilshire Blvd., Suite 900
Los Angeles, CA 90017
Telephone: (213) 707-3177
Fax: (213) 707-3178

BENCHMARK
B.2.9 FT DIA. KPS 14 "BIG " STAMPED "79-118"
NORTH OF CURVE, SOUTH SIDE OF STATE 217 (100')
WEST OF CHANNEL, PER COOR 4073.830' ELEV = 986.87

APPROVED BY:

S. J. C. Stewner
FLOOD CONTROL ENGINEER

DATE

RECOMMENDED BY:

T. F. Pasco
ASSISTANT TO MANAGER

DATE

ACCEPTED BY:

S. J. C. Stewner
EXECUTIVE DIRECTOR

DATE
SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

PLANS FOR RECONSTRUCTION

ON

WEST STATE STREET STORM DRAIN
SEGMENT IIIB
BETWEEN CENTRAL AVENUE TO MOUNTAIN AVENUE
F01087
SAN ANTONIO CREEK SYSTEM
# Reinforced Concrete Rectangular Channel Schedule (Northernly Side)

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**Transverse Reinforcement Steel**

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**Concrete**

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**Diagram:**

- **TYPICAL CHANNEL SECTION**
- **NORTHERLY SIDE**
- **NOT TO SCALE**

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**Section Details:**

1. **Vertical Expansion Joint**
2. **Horizontal Expansion Joint**
3. **Reinforcement Details**
4. **Concrete Placement**
5. **Balancing Bars**
6. **Concrete Placement**

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**Detailed Notes:**

- For Structural Notes and Design

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**Prepared For:**
- P&D Technologies
- (949) 865-1447

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**Document Information:**
- Prepared By: P&D Technologies
- Date: 02/04/2014
- Scale: 1:120
- File No: 1507.025

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**Reinforced Concrete Rectangular Channel Schedule (Northernly Side)**

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**Flood Control District:**
- San Bernardino County

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**Approval:**
- Sealed by Project Engineer

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**References:**
### Reinforced Concrete Rectangular Channel Schedule (Southerly Side)

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**Structural Notes**

1. Dimensions from face of concrete to steel are to be outside edge of bar and shall be two inches unless otherwise shown.
2. Concrete dimensions shall be measured horizontally or vertically on the profile, and parallel to or at right angles (or radially) to centerline of conduit on the plan, except as otherwise shown.
3. All bar sizes and hooks shall conform to the American Concrete Institute's standard code requirements for reinforced concrete, latest edition.
4. Placing of reinforcement shall conform to the American Concrete Institute's standard code requirements for reinforced concrete, latest edition.
5. Transverse expansion joints shall not be placed within 30 inches of inlets.
6. Transverse expansion joints in walls and slabs shall be in negative bending. Transverse construction joints shall be normal, or radial, to the centerline of construction.
7. The transverse reinforcing steel shall terminate one and one-half inches from the concrete surfaces unless otherwise shown on the structural details.
8. Exposed edges of concrete members shall be rounded or chipped.
9. No splices in transverse steel reinforcement shall be permitted other than shown on the drawing without approval of the engineer. No more than two splices in any longitudinal bar between transverse joints. Splices will be staggered. Splices shall be in accordance with the latest ACI code requirements.

**Concreting Notes**

- All rectangular open channel sections shall be placed in accordance with ACI Section 207.2, except as otherwise shown.
- Unless otherwise shown on the drawings, the minimum spacing of bars shall not be less than 2D, except for bars within 30 inches of the transverse expansion joint.

**Flood Control District**

- Reinforced concrete rectangular channel schedule (Southerly Side)

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**TYPICAL CHANNEL SECTION (SOUTHERLY SIDE)**

- Chain Link Fence
- Per Spec. 1 & 8
GENERAL NOTES
LOAD FACTOR DESIGN

Design Bridge design specifications
(1983 AASHO with Interim and Revisions by CALTRANS)

Dead Load:
1. Vertical earth pressure: 140 psf
   Horizontal earth pressure: 100 psf
2. Vertical earth pressure: 140 psf
   Horizontal earth pressure: 35 psf

Live Load: HS20-44
Reinforced concrete

Tyre 1: 4,000 psf (concrete compressive strength of 28 days)
fy = 60,000 psi (yield strength of reinforcement)

INDEX TO PLANS

SHEET NO.  TITLE
17 General Plan
18 Foundation Plan
19 Typical Section

STANDARD PLANS DATED JULY, 1992

1. AIDA: Abbreviations
2. ASA: Symbols
3. ASCE: Excavation And Backfill Cast-In-Place
4. BC: Reinforced Concrete Box And Arch Culverts
5. BO-3: Bridge Details
6. BHT: Chain Link Rolling

P&O Consultants
1100 Town & Country, Ste 300
Bridgewater, CA 95006
(760) 435-1457

PROVIDED FOR

DOKKEN
ENGINEERING

REVISIONS

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
PRIVATE ACCESS *S CULVERT
AT BENSON AVE
GENERAL PLAN

SCALE: 1" = 100'

DATE: 6/29/00
FILE NO.: 20-00
ORIGINAL NO.: 17 of 26
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
CONSTRUCTION NOTES

1. CONSTRUCT ALL PIPE PER CITY OF ONTARIO STD Dwg 406.
2. CONTRACTOR SHALL SCHEDULE WORK WITH CITY OF ONTARIO AND CHINO PRIOR TO START OF WATER RELOCATION.

NOTES:

1. CONSTRUCT 14" X 4" THICK WALL PIPE (DMLC) SOLID WELD JOINTS PER CITY OF ONTARIO STD Dwg 405.
2. CONSTRUCT 14" BUTTSTRAP PER CITY OF ONTARIO STD Dwg 406.
3. CONSTRUCT 14" X 45° WELD STL. ELBOW DMLC PER CITY OF ONTARIO STD Dwg 408.
4. CONSTRUCT 6" BLOW-OFF ASSEMBLY PER CITY OF ONTARIO STD Dwg 416.
5. RAISE ALL MANHOLES TO FINISHED GRADE PER CITY OF ONTARIO STD Dwg 417.
6. CONSTRUCT 14"X14"X12" TEE WELD STL. DMLC PER CITY OF ONTARIO STD Dwg 406.
7. CONSTRUCT 14" GATE VALVE WITH BLIND FLANGE PER CITY OF ONTARIO STD Dwg 428.

1. CONSTRUCT 14" X 4" STORM DRAIN (DMLC) SEE STORM DRAIN SHEETS.
2. CONSTRUCT 14" X 4" CONCRETE BOX STORM CHAMBER.
3. CONSTRUCT BUSHING FOR UPPER STANDARD.
4. RAISE EXISTING CASING AT 25' X 6/0 & TRACKS.
5. RAISE EXISTING 14" WATER-LINE (DMLC) SEE SHEET 12.