

GENERAL NOTES

GENERAL:

- 1.) VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
- 2.) NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS SHOWN ON THE TYPICAL DETAIL SHEETS. USE TYPICAL DETAILS UNLESS NOTES OTHERWISE.
- 3.) WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, CONSTRUCTION DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- 4.) DO NOT BACKFILL AGAINST WALLS LATERALLY UNSUPPORTED OR RESTRAINED AT THE TOP PRIOR TO THE CONCRETE ATTAINING THE SPECIFIED COMPRESSIVE STRENGTH.
- 5.) DO NOT LOAD CONCRETE MEMBERS BEFORE CONCRETE HAS ATTAINED THE SPECIFIED COMPRESSIVE STRENGTH.
- 6.) APPLY WATERPROOFING TO EXTERIOR WALL SURFACES EXPOSED TO EARTH AND TOP OF THE UNDERPASS AND UTILITY CORRIDOR :SEE SPECIFICATIONS.
- 7.) INSTALL PRECAST GIRDERS PRIOR TO CONSTRUCTION OF C.I.P. CONCRETE BENTS.

FOUNDATIONS:

- 1.) REFER TO THE CONSTRUCTION SPECIFICATIONS FOR EARTHWORK AND FOUNDATION PREPARATION REQUIREMENTS.

REINFORCED CONCRETE:

- 1.) CONCRETE STRENGTHS: (28 DAY)
RAILINGS AND SIDEWALKS: $f_c = 4000$ P.S.I. (MODIFIED DA CONCRETE)
FOUNDATIONS: $f_c = 4000$ P.S.I. (MODIFIED DA CONCRETE)
WALLS AND ABUTMENTS: $f_c = 4000$ P.S.I. (MODIFIED DA CONCRETE)
PRECAST PANEL: $f_c = 4000$ P.S.I. (MODIFIED DA CONCRETE)
PRESTRESS GIRDERS: $f_c = 6000$ P.S.I. (PAA CONCRETE USING TYPE I, II OR III CEMENT)
- 2.) REINFORCING STEEL: ASTM A615 GRADE 60 DEFORMED. FABRICATION TO BE IN ACCORDANCE WITH ACI 318.
- 3.) UNLESS OTHERWISE DETAILED, PROVIDE 3/8 INCH DIAMETER SPACER BARS OR TIES AT 24 INCHES ON CENTER TO KEEP REINFORCING IN PLACE.
- 4.) NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE WALLS, SLABS, OR FOOTINGS UNLESS SPECIFICALLY DETAILED.
- 5.) JOINTS IN STRUCTURES SHALL BE LOCATED WHERE INDICATED ON THE DRAWINGS.
- 6.) ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION MAY BE ADDED AT NO COST TO THE OWNER AND AS PERMITTED BY THE OWNER'S REPRESENTATIVE.
- 7.) REINFORCING STEEL SPLICE LENGTHS: 48 DIAMETERS UNLESS NOTED OTHERWISE. STAGGER LAP SPLICES IN ADJACENT BARS ONE LAP LENGTH.
- 8.) SECURE ITEMS TO BE EMBEDDED IN CONCRETE PRIOR TO PLACING CONCRETE.

PRESTRESSING NOTES:

WORKING FORCE: PRESTRESSING FORCE REQUIRED AT CENTER OF SPAN OF EACH GIRDER AFTER ALL LOSSES.
TYPE "A" GIRDER: P.F. = 1485 KIPS
TYPE "B" GIRDER: P.F. = 1301 KIPS
TYPE "C" GIRDER: P.F. = 973 KIPS
TYPE "D" GIRDER: P.F. = 1638 KIPS
LOSSES: AREA AND AASHTO REQUIREMENTS.

PRESTRESSING STEEL: SEVEN WIRE UNCOATED, STRESS - RELIEVED 1/2" DIAMETER STAND ($A_s = 0.153$ SQ. IN.) CONFORMING TO ASTM A-416, TYPE 270 K.S.I. MINIMUM ULTIMATE STRENGTH. COAT ENDS OF STRANDS WITH BITUMINOUS WEATHER SEAL.

CONCRETE STRENGTH: AT TIMES OF STRESSING: 4500 P.S.I. MIN. AT 28 DAYS: 6000 P.S.I. MIN.

REINFORCING STEEL: ASTM A-615 P.S.I. MIN.

GIRDER DEFLECTION: SUBMIT DESIGN CALCULATIONS FOR CAMBER WHICH REFLECTS THE TIME OF CASTING, ERECTION, PLACING OF ADDITIONAL DEAD LOADS, AND LONG TERM DEFLECTION (4 YEARS).

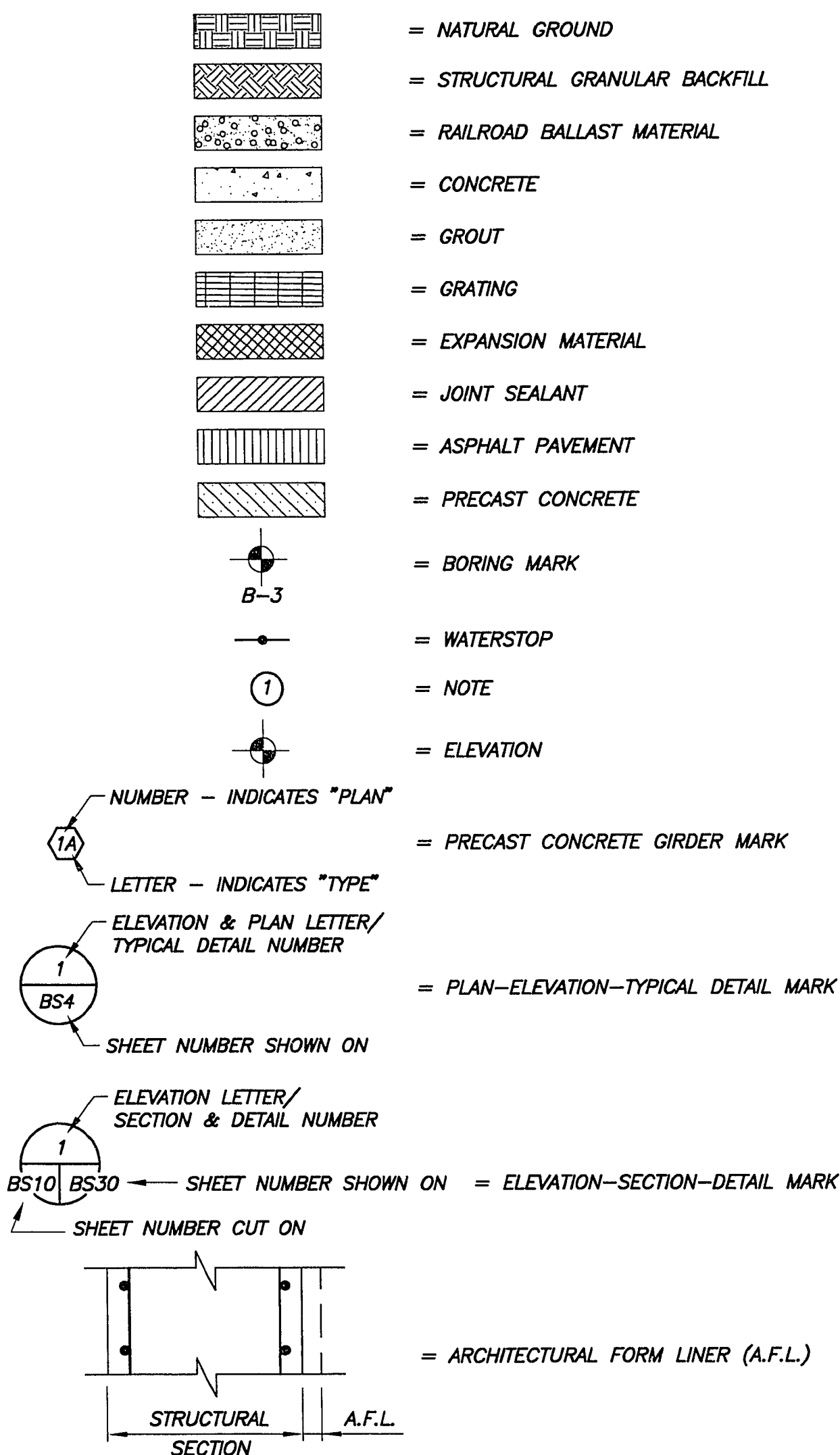
SPECIAL INSPECTIONS AND TESTS:

- 1.) FOUNDATION
- 2.) CONCRETE REINFORCEMENT
- 3.) PORTLAND CEMENT CONCRETE
- 4.) PRESTRESSED CONCRETE GIRDERS
- 5.) BRIDGE BEARING PADS
- 6.) WATERPROOFING

DESIGN CRITERIA:

- 1.) A.A.S.H.T.O. SPECIFICATION: 1989 (UNDERPASS AREA 1, 3A, & 3B) HS20 LIVE LOAD.
- 2.) A.R.E.A. SPECIFICATION: 1990-91 (UNDERPASS AREA 2) E80 LIVE LOAD.
- 3.) A.C.I. 318-89
- 4.) A.I.S.C. 8TH EDITION.
- 5.) EARTHQUAKE: ZONE 2B.
- 6.) FOUNDATION: UNDERPASS - 7500 P.S.F. RETAINING WALLS - 4500 P.S.I. MISC. - 4500 P.S.F.

SYMBOLS



GENERAL DESCRIPTION

BASE CONTRACT:

1. AREA 1 RETAINING WALL FROM STA. 4+52.33 TO STA. 7+33.33 NORTH SIDE OF R.O.W. & FROM STA. 2+57.33 TO SOUTH SIDE OF R.O.W.
2. AREA 1 UNDERPASS STRUCTURE FROM STA. 7+33.33 TO STA. 8+01.33
3. AREA 2 (U.P.R.R. R.O.W.) UNDERPASS STRUCTURE FROM STA. 8+01.33 TO STA. 9+01.33.
4. AREA 3A & 3B UNDERPASS STRUCTURE FROM STA. 9+01.33 TO STA. 10+45.33
5. AREA 3 ABUTMENT WALL W/PRECAST PANELS WITHOUT CENTER PIER WALL STA. 10+45.33 TO STA. 11+29.33.
6. AREA 3 RETAINING WALL FROM STA. 11+29.33 TO STA. 12+33.33

ADDITIVE ALTERNATE CONTRACT:

1. AREA 1 RETAINING WALL FROM STA. 4+52.33 TO STA. 7+33.33 NORTH SIDE OF R.O.W. & FROM STA. 2+57.33 TO SOUTH SIDE OF R.O.W.
2. AREA 1 UNDERPASS STRUCTURE FROM STA. 7+33.33 TO STA. 8+01.33
3. AREA 2 (U.P.R.R. R.O.W.) UNDERPASS STRUCTURE FROM STA. 8+01.33 TO STA. 9+01.33.
4. AREA 3A & 3B UNDERPASS STRUCTURE FROM STA. 9+01.33 TO STA. 11+29.33.
5. AREA 3 RETAINING WALL FROM STA. 11+29.33 TO STA. 12+33.33

ABBREVIATIONS

A.B.	ANCHOR BOLT
ABUT.	ABUTMENT
ADD'L	ADDITIONAL
A.F.L.	ARCHITECTURAL FORM LINER
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
As	AREA OF REINFORCING STEEL
B.O.	BOTTOM OF
B.O.F.	BOTTOM OF FOOTING
BOT.	BOTTOM
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CL	CENTERLINE
CLR.	CLEAR
COL.	COLUMN
CONN.	CONNECTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
DWG.	DRAWING
DWL.	DOWEL
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
E.O.D.	EDGE OF DECK
E.W.	EACH WAY
F.F.	FINISH FLOOR
F.O.P.	FACE OF PIER
F.Q.W.	FACE OF WALL
FT.	FOOT
FTG.	FOOTING
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
HT.	HEIGHT
H.A.S.	HEADED ANCHOR STUD
HORIZ.	HORIZONTAL
JT.	JOINT
K.S.I.	KIPS PER SQUARE INCH
L.F.	LINEAL FOOT
LET.	LEFT
MANUF.	MANUFACTURER
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.E.C.	MECHANICAL
MIN.	MINIMUM
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
OPP.	OPPOSITE
P.C.	PRECAST CONCRETE
P.F.	PRESTRESSING FORCE - FINAL
PL.	PLATE
P.O.C.	POINT ON CURVE
P.O.T.	POINT ON TANGENT
P.S.I.	POUNDS PER SQUARE INCH
R.	RADIUS
R.C.P.	ROUND CONCRETE PIPE
REINF.	REINFORCING
REQ'D.	REQUIRED
R.O.W.	RIGHT OF WAY
RR.	RAILROAD
RT.	RIGHT
R.W.	RETAINING WALL
R.W.L.O.L.	RETAINING WALL LAYOUT LINE
S.	SLOPE
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SPA.	SPACES
SQ.	SQUARE
STA.	STATION
STD.	STANDARD
T & B	TOP AND BOTTOM
T.O.	TOP OF
T.O.B.	TOP OF BENT
T.O.F.	TOP OF FOOTING
T.O.G.	TOP OF GRATE
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U.P.R.R.	UNION PACIFIC
VERT.	VERTICAL
W/	WITH
Ø	AT DIAMETER

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RECORD DRAWINGS

CLV DRAWING No. 107-V2011

6/9/93	RBP	REVISION-REVISED SHEET INDEX	
7/19/93	RBP	REVISION-REVISED SHEET INDEX	
MARK	DATE	BY	REVISION

DESIGNED:	RBP	PROJECT ENGINEER	DATE
DRAWN:	MWM	PROJECT ENGINEER	DATE
CHECKED:	AHG/DJS	PROJECT MANAGER	DATE

Boyle Engineering Corporation
consulting engineers
Suite 300
1785 E. Sahara Ave
Las Vegas, NV 89104
(702) 731-5511

CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

OGDEN AVENUE UNDERPASS AND ROADWAY
GENERAL NOTES, SYMBOLS & ABBREVIATIONS

DRAWING
BS1C
35 OF 125
BS-1C

2-3-36