Plan View

GREENHILL COUNTRY ESTATES NO. 6

Lot 98

Lot 99

Lot 101

Lot 100

COMMON AREA "K"

THE SANCTUARY

Lot 1

Maple Drive

P.O.B.

20.0' DRAINAGE EASEMENT 10.0' EACH SIDE OF THE EXISTING DRAINAGE SWALE.

20' OF "V" DITCH RIP-RAP LINER REQ'D.

EXISTING 3'x3' INLET BOX

EXIST. REDI-ROCK RETAINING WALL INSTALLED AUG. 2007 AS PART OF THIS PROJECT.

NEW ROCK RETAINING WALL REQ'D. (SEE PLANTER WALL DETAIL SHEET 10)

NEW WATER LINES POINT OF CONNECTION

EXIST. WATER LINES (4" & 6" C900 PVC)

EXIST. WATER TANK

EXIST. ACCESS ROAD TO WATER TANK

EXIST. REDI-ROCK RETAINING WALL INSTALLED AUG. 2007 AS PART OF THIS PROJECT.

NEW ROCK RETAINING WALL REQ'D. (SEE PLANTER WALL DETAIL SHEET 10)

SUBDIVISION BOUNDARY

EXISTING 3'x3' INLET BOX

EXISTING 3'x3' INLET BOX

EXIST. WATER LINES (4" & 6" C900 PVC)

R-O-W CENTERLINE

CENTERLINE OF ASPHALT DESIGN (SEE ALIGNMENT TABLES THIS SHEET)

20.0' DRAINAGE EASEMENT 10.0' EACH SIDE OF THE EXISTING DRAINAGE SWALE.

30.0' DRAINAGE EASEMENT 15.0' EACH SIDE OF THE EXISTING DRAINAGE SWALE.

20' WIDE PAVED PRIVATE ROADWAY (SEE DETAIL SHEET 10)

EXISTING GROUND CONTOURS FROM TOPOGRAPHY SURVEY

EXISTING GROUND CONTOURS FROM AERIAL PHOTOGRAPHY

COMMON AREA "K"

EXIST. ROCK RIP-RAP

CHECK DAM REQ'D

CENTERLINE OF ASPHALT DESIGN AND CENTERLINE OF R-O-W SAME LINE FROM THIS POINT TO EAST

EXIST. ROCK RETAINING WALL INSTALLED AUG. 2007 AS PART OF THIS PROJECT.

5650

CONTINUED ON SHEET 3

KEYED NOTES:

1. 30"x48" O.D. CONC. CATCH BASIN TOP OF GRATE: 5641.41 FL OUT: 5637.45 (MATCH NEW 30" RCP TOP OF PIPE TO EXISTING 15" RCP TOP OF PIPE.)

2. INSTALL 60 LF OF 30" RCP STORM DRAIN PIPE @ 7.4% SLOPE FOR OFFSITE WATER CONVEYANCE ACROSS STREET.

3. INSTALL 30" CONC. PIPE END SECTION. MODIFY EXISTING RECEIVING DRAINAGE CHANNEL AS REQ'D TO ACCOMMODATE NEW PIPE. RIP-RAP ALL NEW DISTURBED CHANNEL WITH LARGE ROCK (2' DIA. MIN.) FL 30" RCP 5633.75±

4. PROVIDE A 6' WIDE x 8' LONG x 4' DEEP (INSIDE DIM. AFTER ROCK PLACEMENT) STILLING BASIN TO SLOW OFF SITE STORM RUNOFF. LINE STILLING BASIN WITH LARGE RIP-RAP (2' - 3' DIA. MIN.)

5. PROVIDE RIP-RAP FROM END OF "V" DITCH TO OPEN DRAINAGE CHANNEL. 12" MIN. RIP-RAP.

6. INSTALL ROADWAY CHECK DAMS (SEE DETAIL ON THIS SHEET)

7. SAW-CUT EXISTING ASPHALT PAVING 1' FROM EDGE. PROVIDE SMOOTH TRANSITION FROM EXISTING TO NEW ASPHALT PAVING.

LINE TABLE

LINE	BEARING	LENGTH
L1	S60°40'10"W	90.00
L2	S53°27'16"W	592.24
L3	S60°39'07"W	28.90
L4	S52°10'13"W	173.58

CURVE TABLE

CURVE	DELTA ANGLE	LENGTH	RADIUS	CHORD DIRECTION	CHORD
C1	7°13'04"	31.49	250.00	N57°03'48"E	31.47
C2	7°11'51"	62.81	500.00	S57°03'11"W	62.77
C3	8°28'54"	74.02	500.00	N56°24'40"E	73.95

CENTERLINE OF ASPHALT DESIGN
P.O.B. CENTER OF CUL-DE-SAC

TYPICAL ROCK CHECK DAM DETAIL

SCALE: NONE

TOP OF BERM 6" BELOW ADJACENT EDGE OF ASPHALT

3:1 SLOPE

2:1 SLOPE

FLOW LINE DITCH

BERM OVERFLOW 6" BELOW TOP OF BERM

TOP OF BERM 6" BELOW ADJACENT EDGE OF ASPHALT

4" ROCK LINING WITH GEO-TEXTILE WEED BARRIER FABRIC

12" ROCK RIP-RAP PLACED IN DRAINAGE SWALES TO PREVENT EROSION.

INSTALL RIP-RAP 6" MIN. BELOW FINISH GRADE OF DITCH

FLOW LINE DITCH

Profile

NOTE:
ROUGH GRADING, INSTALLATION OF GRANULAR BORROW, RETAINING WALLS AND STORM DRAIN PIPING LABELED AS EXISTING HAVE BEEN INSTALLED AS PART OF THIS PROJECT.

PVI STA = 27+00.83
PVI ELEV = 5685.39
A.D. = 8.49
K = 29.46

PVI STA = 23+50
PVI ELEV = 5673.06
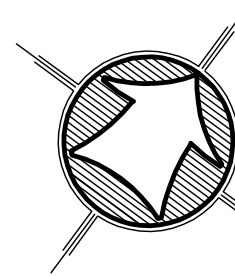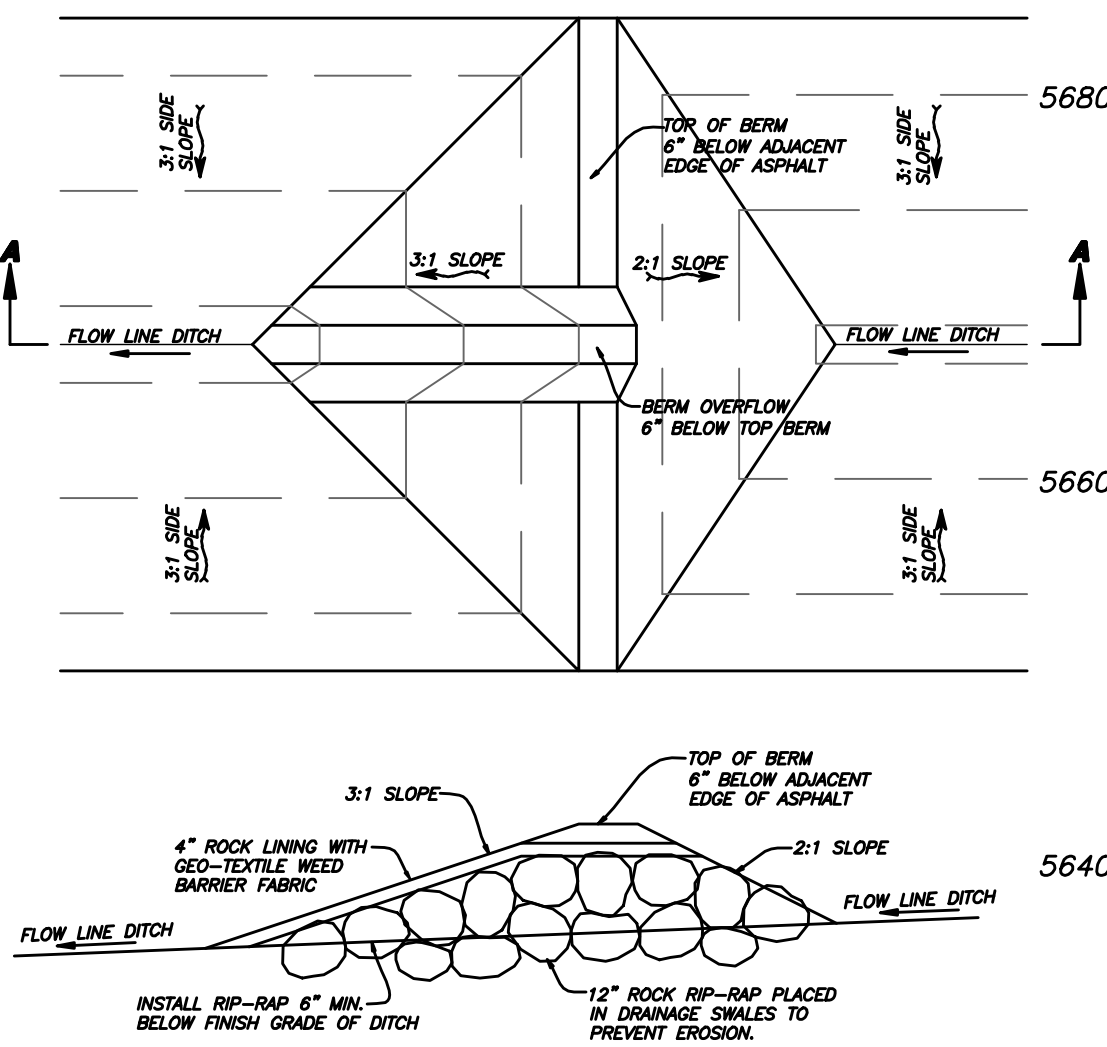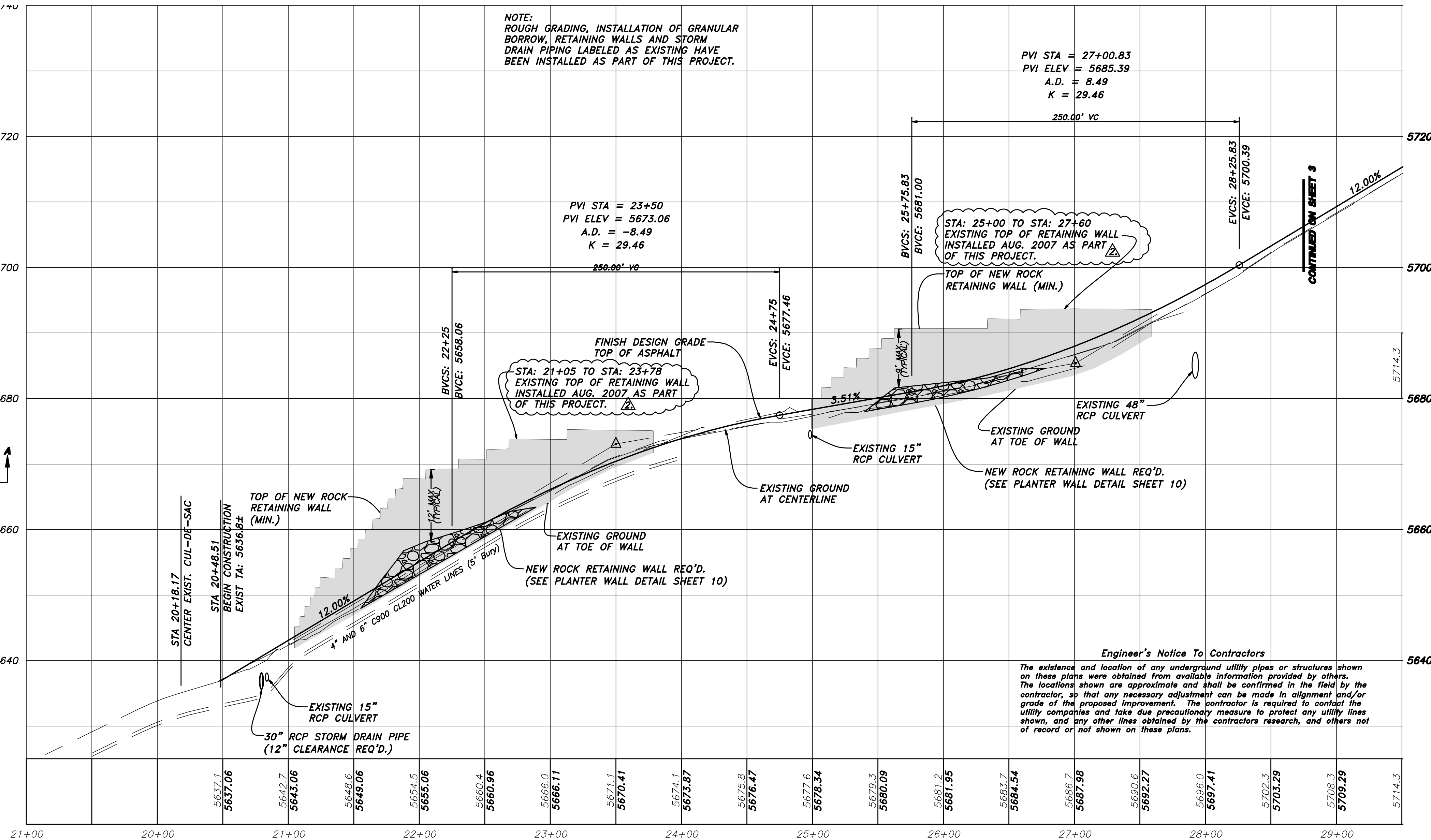A.D. = -8.49
K = 29.46

250.00' VC

250.00' VC

BVCS: 22+25
BVCE: 5658.06

BVCS: 25+75.83
BVCE: 5681.00

EVCS: 24+75
EVCE: 5677.46

EVCS: 28+25.83
EVCE: 5700.39

STA: 21+05 TO STA: 23+78 EXISTING TOP OF RETAINING WALL INSTALLED AUG. 2007 AS PART OF THIS PROJECT.

STA: 25+00 TO STA: 27+60 EXISTING TOP OF RETAINING WALL INSTALLED AUG. 2007 AS PART OF THIS PROJECT.

FINISH DESIGN GRADE TOP OF ASPHALT

TOP OF NEW ROCK RETAINING WALL (MIN.)

TOP OF NEW ROCK RETAINING WALL (MIN.)

EXISTING GROUND AT CENTERLINE

EXISTING GROUND AT TOE OF WALL

NEW ROCK RETAINING WALL REQ'D. (SEE PLANTER WALL DETAIL SHEET 10)

EXISTING GROUND AT TOE OF WALL

EXISTING 15" RCP CULVERT

EXISTING 15" RCP CULVERT

EXISTING 48" RCP CULVERT

NEW ROCK RETAINING WALL REQ'D. (SEE PLANTER WALL DETAIL SHEET 10)

STA 20+18.17 CENTER EXIST. CUL-DE-SAC

STA 20+48.51 BEGIN CONSTRUCTION EXIST TA: 5636.8±

4" AND 6" C900 CL200 WATER LINES (5' BUR)

12.00%

3.51%

12.00%

12.00%

5714.3

CONTINUED ON SHEET 3

EXISTING 15" RCP CULVERT

30" RCP STORM DRAIN PIPE (12" CLEARANCE REQ'D.)

SCALE: 1" = 50' HORZ.
1" = 10' VERT.

Scale in Feet
0 50 100

LEGEND:

- PROPERTY BOUNDARY LINE
- LOT LINE
- CENTERLINE
- EASEMENT
- BUILDING SETBACK
- STORM DRAIN PIPE
- LAND DRAIN PIPE
- EXISTING 10' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- STREET MONUMENT
- INLET BOX
- PREFERRED BUILDABLE AREA
- PROPOSED ASPHALT PAVEMENT
- PROPOSED PRIVATE DRIVE

Profile station/elevation data (bottom)

Stations: 21+00, 20+00, 21+00, 22+00, 23+00, 24+00, 25+00, 26+00, 27+00, 28+00, 29+00

Elevations: 5637.06, 5637.06, 5642.7, 5643.06, 5648.6, 5649.06, 5643.5, 5655.06, 5660.4, 5660.96, 5666.11, 5666.11, 5671.1, 5670.41, 5674.1, 5673.87, 5675.8, 5676.47, 5677.6, 5678.34, 5679.2, 5680.09, 5681.2, 5681.95, 5683.7, 5684.54, 5686.6, 5687.98, 5690.6, 5692.27, 5694.6, 5697.41, 5702.3, 5703.29, 5705.29, 5709.29, 5714.3

No.	Date	By	Revision
2.	9/17/2012	MBJ	Added As-Built dates per W.C. Engineer.
1.	7/16/2012	MBJ	Revised drawing per W.C. Engineer review.

PROFESSIONAL ENGINEER
No. 276689
MATTHEW B. JAY
LICENSED
STATE OF UTAH

Engineer's Notice To Contractors

The existence and location of any underground utility pipes or structures shown on these plans were obtained from available information provided by others. The locations shown are approximate and shall be confirmed in the field by the contractor, so that any necessary adjustment can be made in alignment and/or grade of the proposed improvement. The contractor is required to contact the utility companies and take due precautionary measures to protect any utility lines shown, and any other lines obtained by the contractors research, and others not of record or not shown on these plans.

NOTICE!

EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

Call BEFORE YOU Dig

1-800-662-4111
UNDERGROUND SERVICE

Lot 3

NOTE:
CENTERLINE OF ROADWAY
CONSTRUCTION TO FOLLOW THE
CENTERLINE OF THE RIGHT-OF-WAY.
(SEE THE FINAL PLAT FOR ALIGNMENT)

EXISTING GROUND
CONTOURS FROM
AERIAL PHOTOGRAPHY

EXIST. ROCK WALL

EXIST. 6
TOE SLO

EXISTING GROUND
CONTOURS FROM
TOPOGRAPHY SURVEY
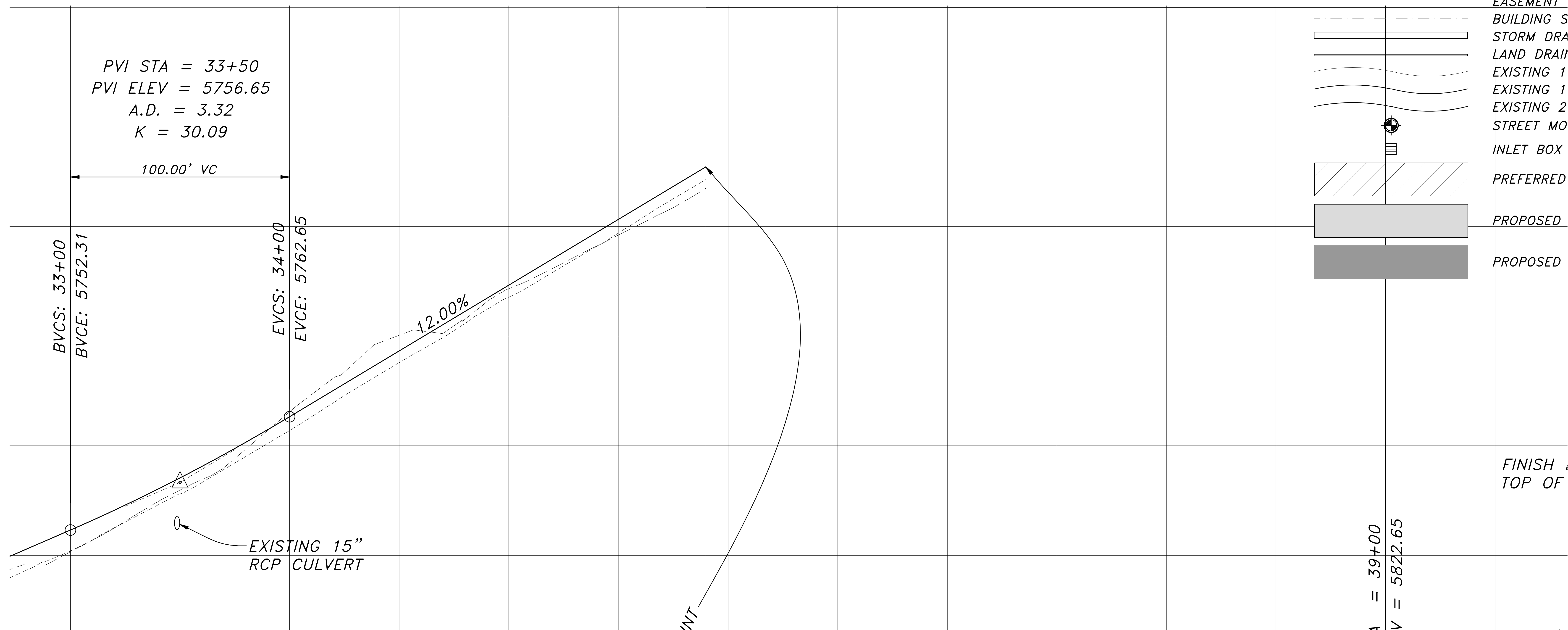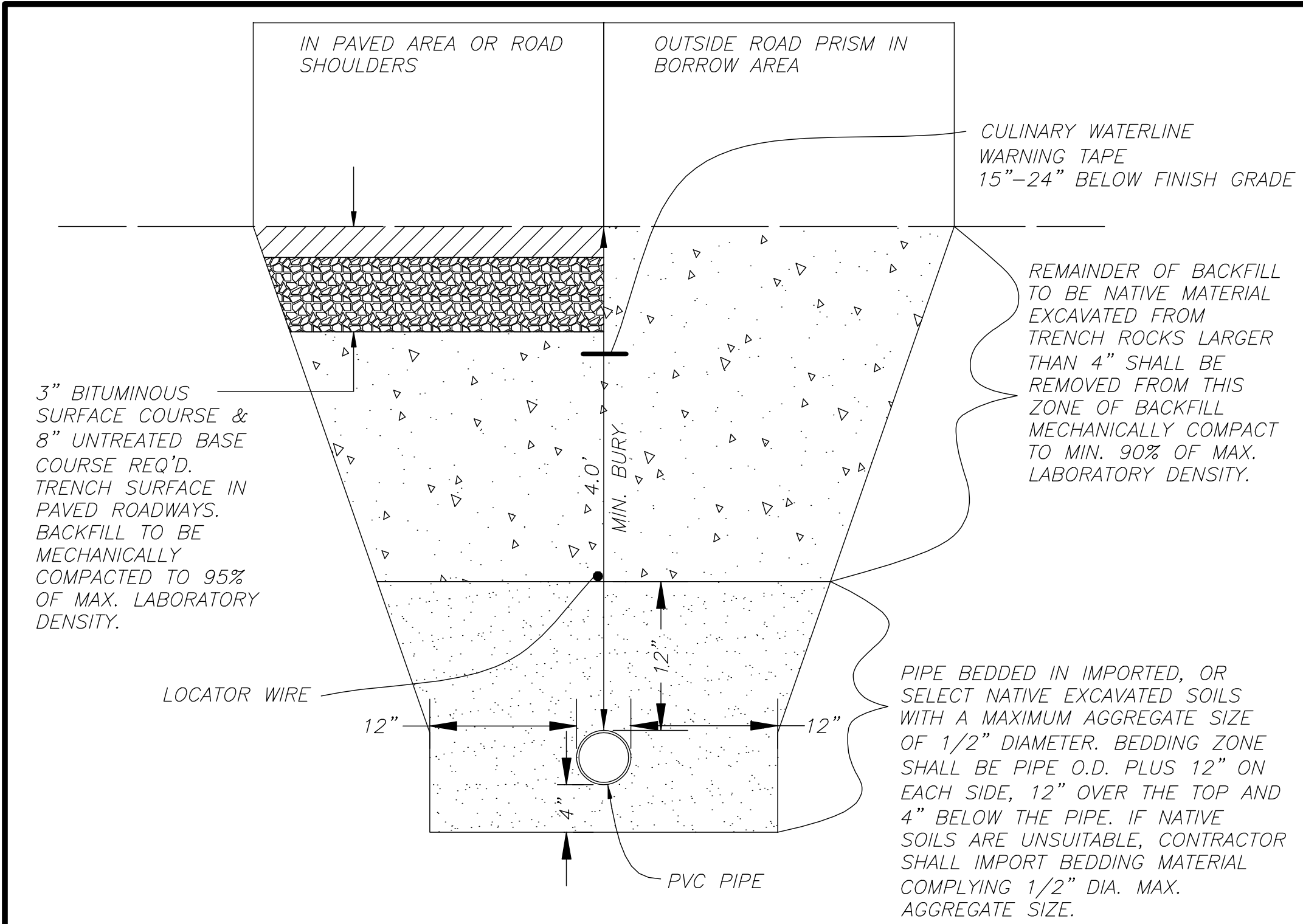
NOTE:
ROUGH GRADING, INSTALLATION OF GRANULAR
BORROW, RETAINING WALLS AND STORM
DRAIN PIPING LABELED AS EXISTING HAVE
BEEN INSTALLED AS PART OF THIS PROJECT.

L E G E N D:

PROPERTY
LOT LINE
CENTERLINE
EASEMENT
BUILDING S
STORM DRA
LAND DRAIN
EXISTING 1
EXISTING 1
EXISTING 2
STREET MO
INLET BOX
PREFERRED
PROPOSED
PROPOSED

PVI STA = 33+50
PVI ELEV = 5756.65
A.D. = 3.32
K = 30.09

100.00' VC

BVCS: 33+00
BVCE: 5752.31

EVCS: 34+00
EVCE: 5762.65

12.00%

EXISTING 15"
RCP CULVERT

FINISH
TOP OF

A = 39+00
V = 5822.65

NT

Lower Detention Basin

Callout notes (red boxes):
- Does this need any extra rip-rap with the pipe discharging here? Typ.
- Is this where the Section A-A is cut? I can't really tell where it goes.
- Is this really supposed to be the same as the rim of the box? Typ.
- Is there a shape/width to the over flow channels? Typ.
- What is the slope on the bottom of the pond? Typ.
- Section A-A?

Labels (Lower Detention Basin):
- 63' OF 24" RCP SD PIPE @ 1.0% (FIELD VERIFY 12" MIN COVER)
- DAYLIGHT PIPE IN EXIST. DRAINAGE DITCH FL=5790.0±
- EXIST. ROCK-LINED DRAINAGE DITCH
- 12" MIN. ROCK RIP-RAP SPILLWAY REQ'D. OVERFLOW ELEV: 5796.50
- 80' OF 18" RCP SD PIPE @ 20.0%
- FL=5807± MATCH SWALE
- 18" RCP
- 3'x3'x6' DEEP OUTLET STRUCTURE RIM: 5796.50 FL: 5790.85
- 19' OF 24" RCP REQ'D.
- FL=5791.00
- FL=5794.00
- 20.00
- 2:1

Upper Detention Basin

Labels (Upper Detention Basin):
- 12" MIN. ROCK RIP-RAP SPILLWAY REQ'D. OVERFLOW ELEV: 5870.50
- EXIST. 18" RCP FL: 5856.40
- CONNECT TO EXIST. 18" RCP FL: 5862.00
- 24' OF 18" RCP REQ'D.
- 18" RCP
- 14' OF 18" RCP REQ'D. FL: 5867.00
- 3'x3'x4' DEEP OUTLET STRUCTURE RIM: 5870.50 FL: 5866.65
- RECONSTRUCT EXIST. SPRING OVERFLOW DRAINAGE DITCH TO FLOW INTO DETENTION BASIN
- 25'
- 64'
- 2:1
- 3:1

Lower Detention Basin A-A

Lower Det Basin X-Section B-B

Upper Detention Basin C-C

Upper Detention Basin D-D

No.	Date	By	Revision
2.	9/17/2012	MBJ	Added As-Built dates per W.C. Engineer.
1.	7/16/2012	MBJ	Revised drawing per W.C. Engineer review.

PROFESSIONAL ENGINEER
No. 270089
MATTHEW R. METER
LICENSED STATE OF UTAH

SHEET 1
OF 1
SHEETS

TYPICAL TRENCH SECTION

IN PAVED AREA OR ROAD SHOULDERS

OUTSIDE ROAD PRISM IN BORROW AREA

CULINARY WATERLINE WARNING TAPE 15"-24" BELOW FINISH GRADE

REMAINDER OF BACKFILL TO BE NATIVE MATERIAL EXCAVATED FROM TRENCH ROCKS LARGER THAN 4" SHALL BE REMOVED FROM THIS ZONE OF BACKFILL MECHANICALLY COMPACT TO MIN. 90% OF MAX. LABORATORY DENSITY.

3" BITUMINOUS SURFACE COURSE & 8" UNTREATED BASE COURSE REQ'D. TRENCH SURFACE IN PAVED ROADWAYS. BACKFILL TO BE MECHANICALLY COMPACTED TO 95% OF MAX. LABORATORY DENSITY.

MIN. BURY

LOCATOR WIRE

PIPE BEDDED IN IMPORTED, OR SELECT NATIVE EXCAVATED SOILS WITH A MAXIMUM AGGREGATE SIZE OF 1/2" DIAMETER. BEDDING ZONE SHALL BE PIPE O.D. PLUS 12" ON EACH SIDE, 12" OVER THE TOP AND 4" BELOW THE PIPE. IF NATIVE SOILS ARE UNSUITABLE, CONTRACTOR SHALL IMPORT BEDDING MATERIAL COMPLYING 1/2" DIA. MAX. AGGREGATE SIZE.
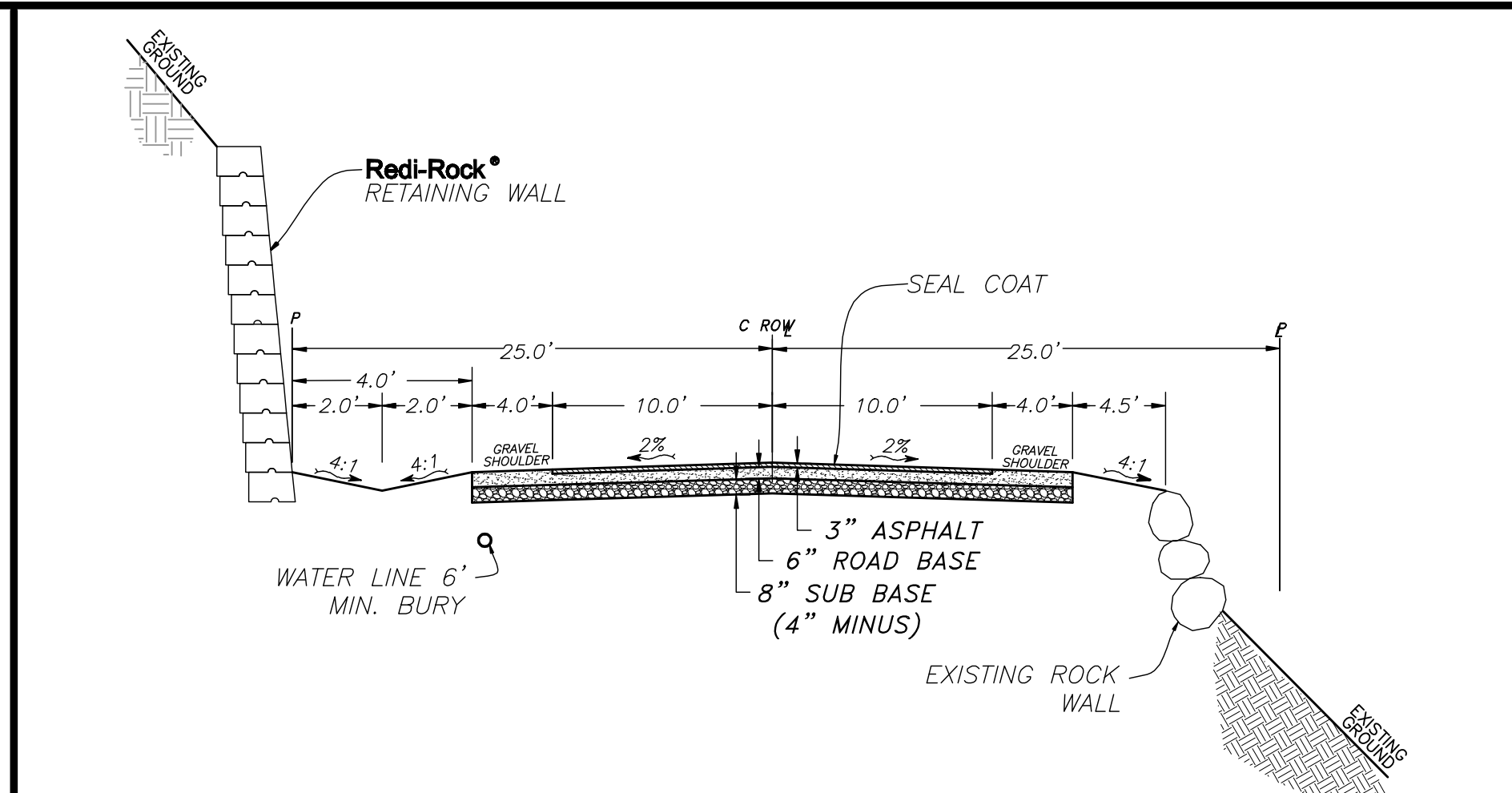
PVC PIPE

TYPICAL TRENCH SECTION
SCALE: NONE

THRUST BLOCKING DETAIL

ALL TIMBER FOR BLOCKING IS TO BE REDWOOD OR CEDAR.

VALVE
PLUG
BENDS
PLUG TEE
TEE
CROSS

NOTES:

1. CONCRETE SHALL NOT BE PLACED AROUND JOINTS AND BOLTS. COVER ALL METAL CONTACT AREAS WITH A POLY WRAP PRIOR TO CONCRETE PLACEMENT.

2. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL BENDS OF 22.5' AND GREATER AND BEHIND ALL TEES, FIRE HYDRANTS, AND PLUGS. THEY SHALL BE CONSTRUCTED OF 3000 P.S.I. CONCRETE OR BETTER.

PIPE ID	CROSS	TEE\CAP	BENDS				BENDS		
			90'	45'	22.5'	11.25'	45'	22.5'	11.25'
4"	2	2	2	1	1	1	1.0	0.5	0.5
6"	2	3	4	2	1	1	1.5	1.0	0.5
8"	3	5	7	4	2	1	2.5	1.5	1.0
10"	4	8	10	6	3	1	4.0	2.5	1.5
12"	5	10	14	8	4	2	5.0	3.0	1.5
16"	10	20	24	12	7	4	8.5	4.5	2.5
18"	12	24	30	16	10	5	11.0	6.0	3.0
20"	14	28	40	20	12	6	14.0	8.0	4.0

BEARING AREA IN SQUARE FEET / CONC./CU. YDS.

THRUST BLOCKING DETAIL
SCALE: NONE

DEAD END HAMMER HEAD

HARD SURFACE PRIVATE DRIVEWAY
60.00" MIN.
20.00"
R28.00'
10.00'
HARD SURFACE PRIVATE DRIVEWAY

DEAD END HAMMER HEAD
NOT TO SCALE

STANDARD ROADWAY HAMMER HEAD

HARD SURFACE PRIVATE DRIVEWAY
ROAD CONTINUES
ROAD CONTINUES
60.00" MIN.
20.00"
R28.00'
R28.00'
10.00'
HARD SURFACE PRIVATE DRIVEWAY
10:1 TAPER
10:1 TAPER
MATCH DRIVEWAY WIDTH

NOTE:
FIRE TRUCK TURN AROUND IN RESIDENTIAL DRIVEWAY/GARAGE AREAS SHALL BE PROVIDED AS SHOWN AND HAVE A MINIMUM HARD SURFACE AREA FOR A VEHICLE TURNING RADIUS OF 28 FEET OF GREATER. IN LIEU OF A CIRCULAR TURN AROUND, AN APPROVED HAMMER HEAD TURN AROUND MAY BE USED.

STANDARD ROADWAY HAMMER HEAD
NOT TO SCALE

TYPICAL STREET SECTION DETAIL W/Redi-Rock WALL DETAIL

Redi-Rock® RETAINING WALL
SEAL COAT
C ROW
25.0'   25.0'
2.0' 4.0' 4.0' 10.0' 10.0' 4.0' 4.5'
4:1 GRAVEL SHOULDER 2% 2% GRAVEL SHOULDER 4:1
WATER LINE 6' MIN. BURY
3" ASPHALT
6" ROAD BASE
8" SUB BASE (4" MINUS)
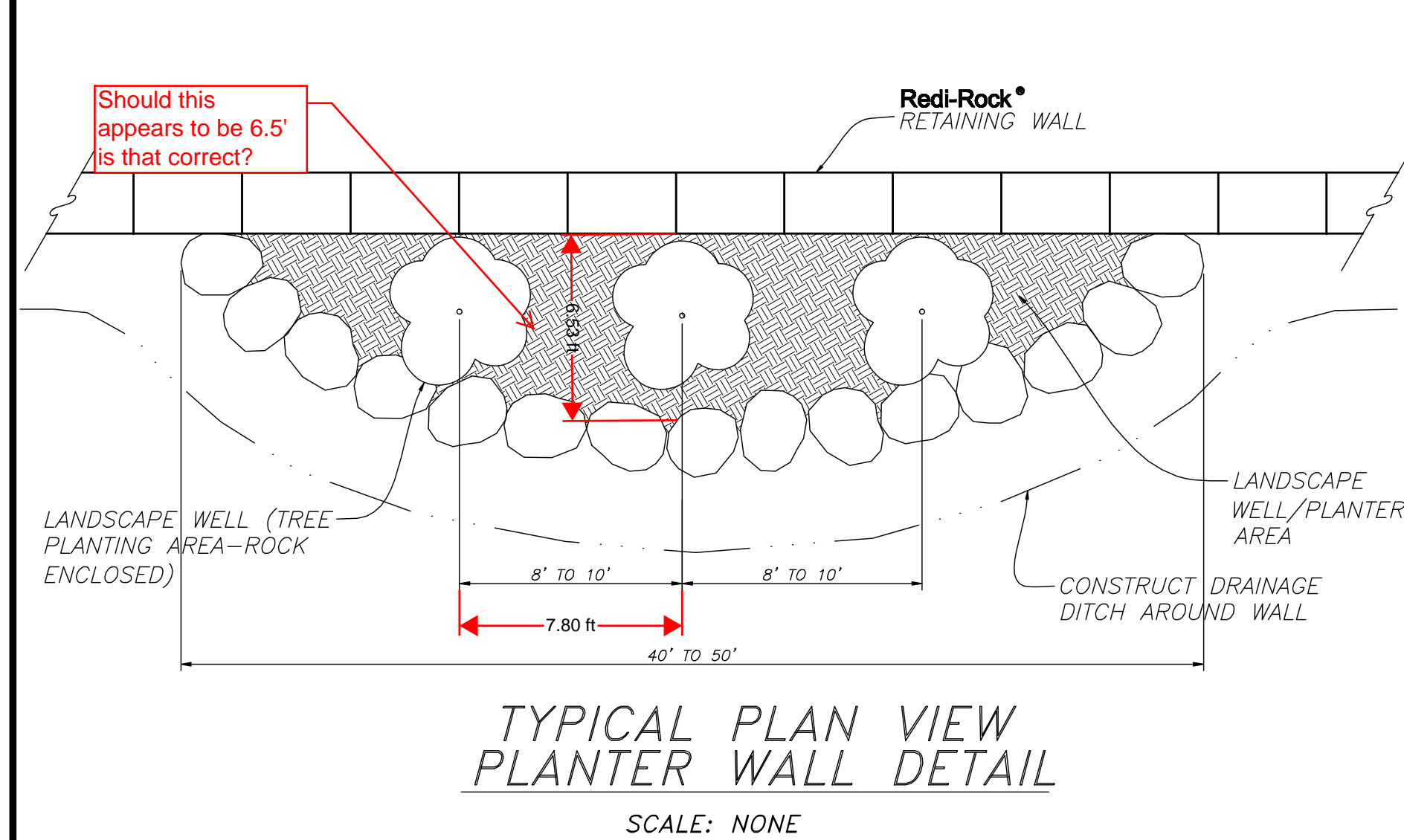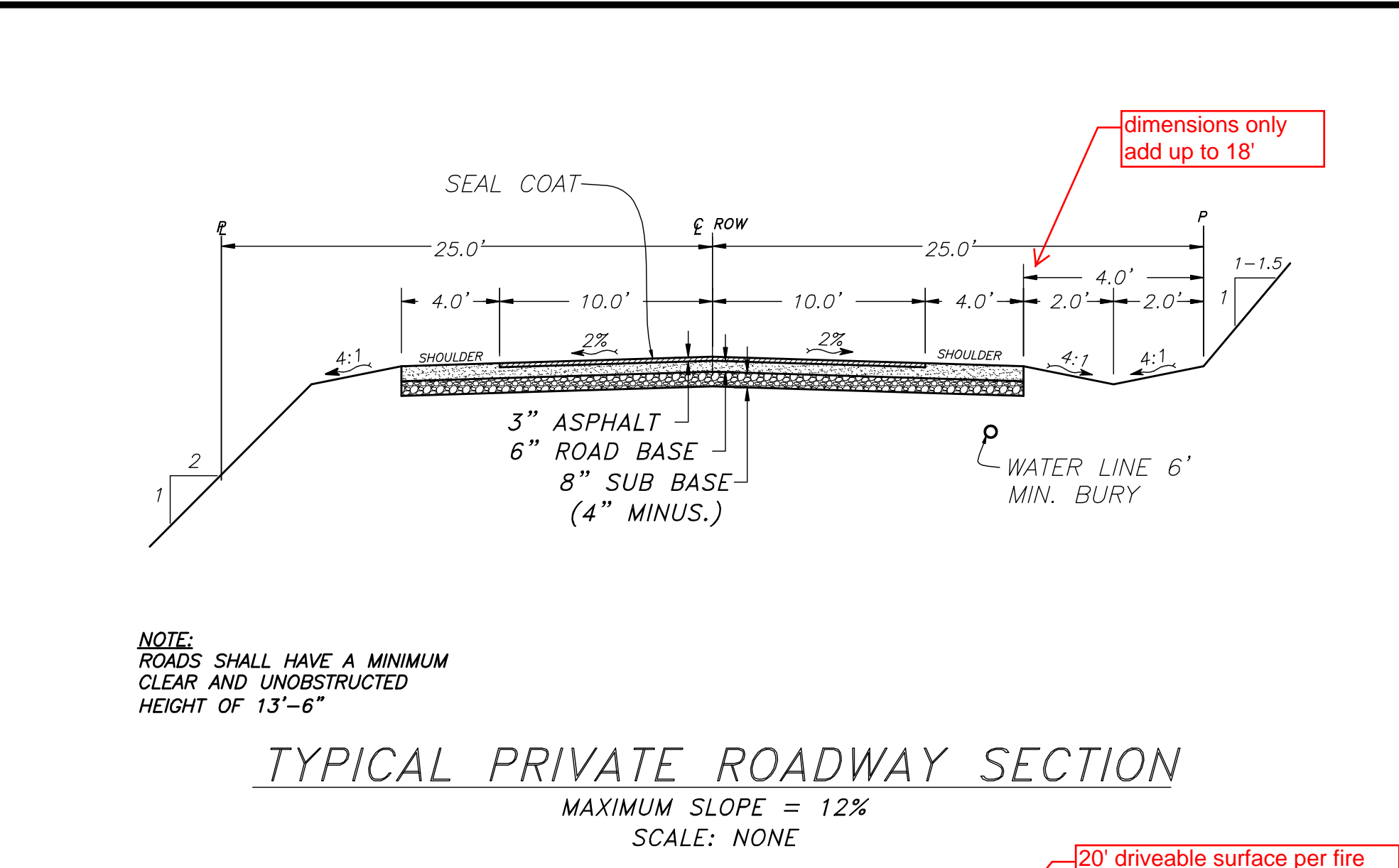EXISTING ROCK WALL

TYPICAL STREET SECTION DETAIL W/Redi-Rock WALL DETAIL
SCALE: NONE Not for Construction

TYPICAL CROSS SECTION PLANTER WALL DETAIL
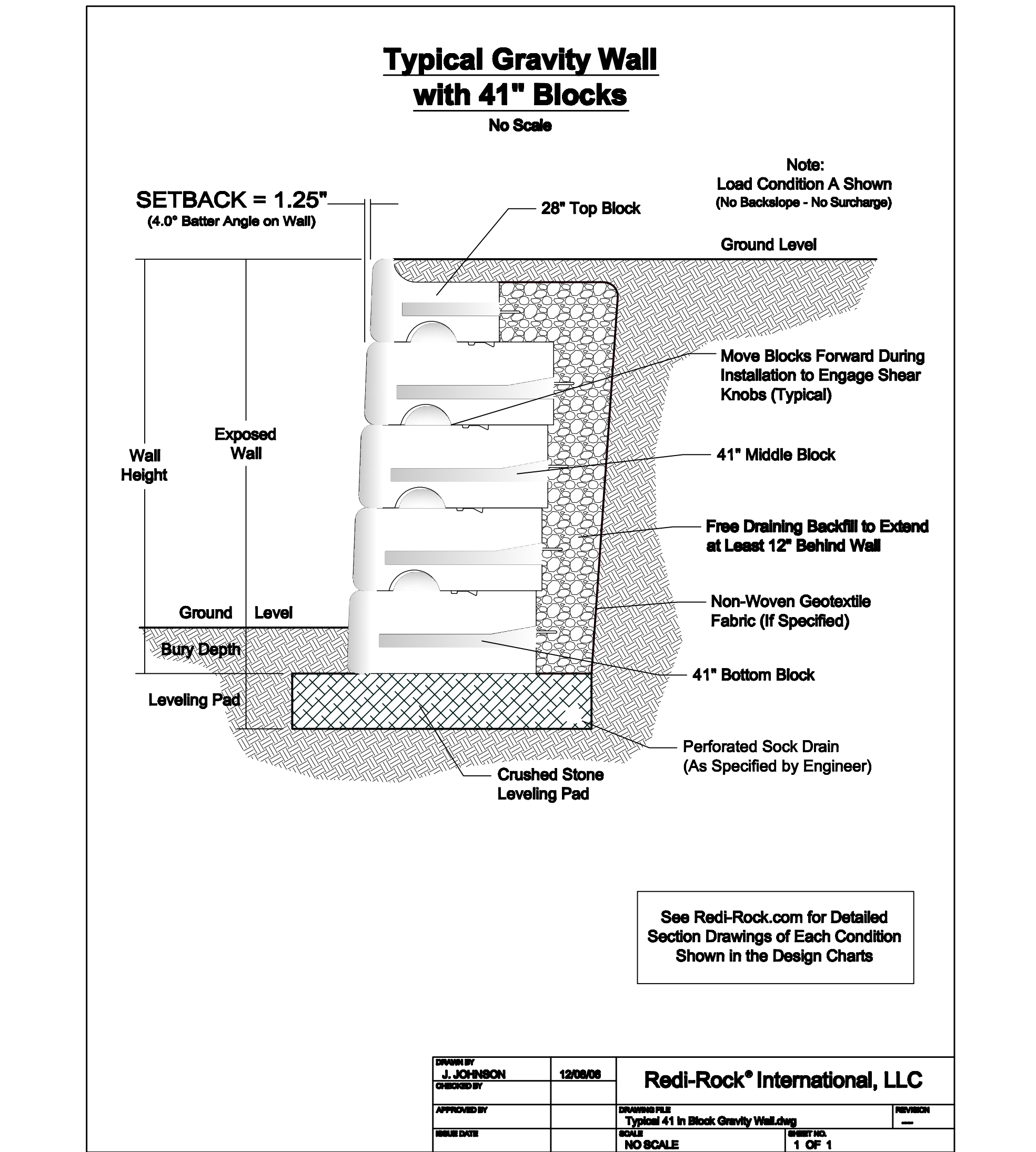
Redi-Rock® RETAINING WALL

VARIES 2' TO 3' HIGH (SEE PLAN)

INSTALL RIP-RAP 6" MIN. BELOW FINISH GRADE
2%   2%
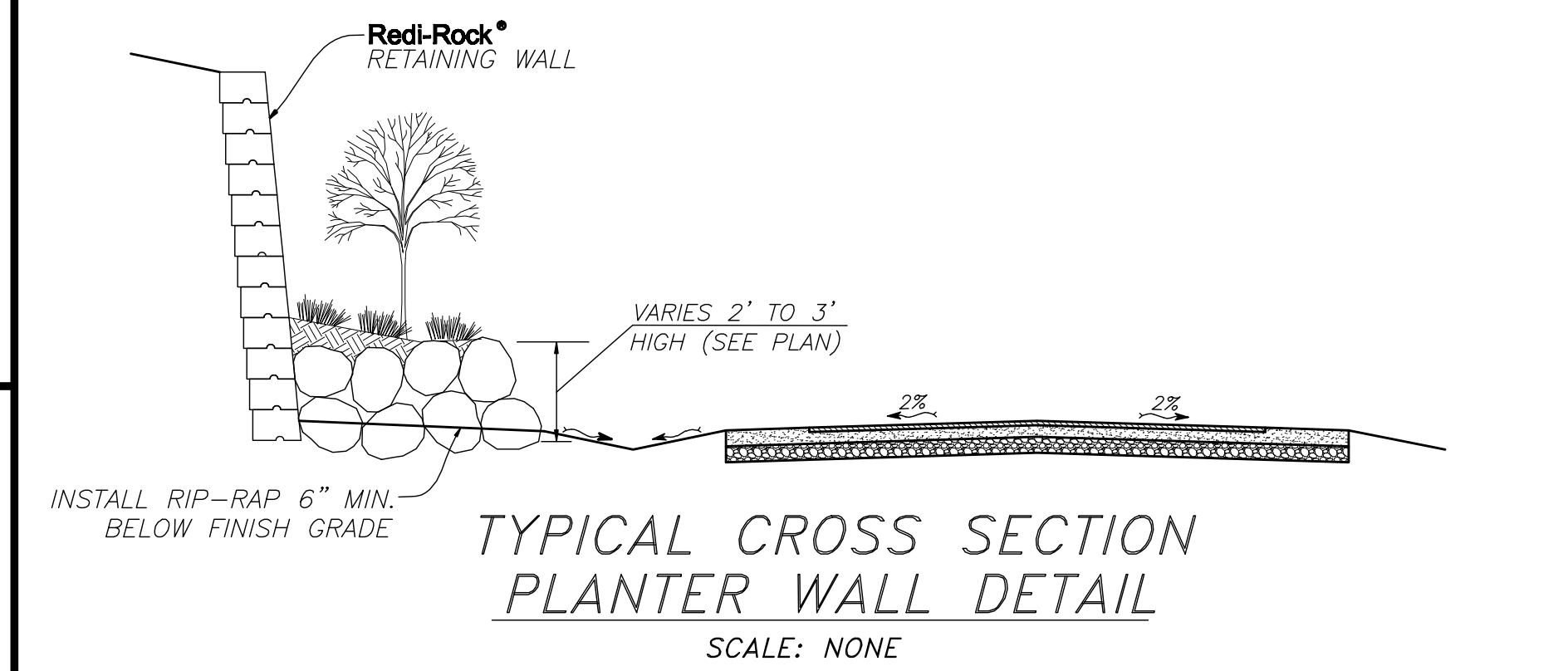
TYPICAL CROSS SECTION PLANTER WALL DETAIL
SCALE: NONE

TYPICAL PLAN VIEW PLANTER WALL DETAIL

Should this appears to be 6.5' is that correct?

Redi-Rock® RETAINING WALL

LANDSCAPE WELL (TREE PLANTING AREA-ROCK ENCLOSED)
8' TO 10'   8' TO 10'
7.80 ft
40' TO 50'
LANDSCAPE WELL/PLANTER AREA
CONSTRUCT DRAINAGE DITCH AROUND WALL

TYPICAL PLAN VIEW PLANTER WALL DETAIL
SCALE: NONE

TYPICAL PRIVATE ROADWAY SECTION

dimensions only add up to 18'

SEAL COAT
25.0'   € ROW   25.0'
4.0' 10.0' 10.0' 4.0' 2.0' 4.0' 2.0'
4:1 SHOULDER 2% 2% SHOULDER 4:1 4:1
3" ASPHALT
6" ROAD BASE
8" SUB BASE (4" MINUS.)
WATER LINE 6' MIN. BURY

NOTE:
ROADS SHALL HAVE A MINIMUM CLEAR AND UNOBSTRUCTED HEIGHT OF 13'-6"

TYPICAL PRIVATE ROADWAY SECTION
MAXIMUM SLOPE = 12%
SCALE: NONE

20' WIDE PRIVATE DRIVEWAY TYPICAL STREET SECTION

20' driveable surface per fire department. This was also stated in my review dated September 11, 2007.

€ ROAD
2.5' 7.5' 7.5' 2.5' 2.0'
SHOULDER 2% 2% SHOULDER 4:1
6" ROAD BASE
8" SUB BASE (4" MINUS.)
WATER LINE 6' MIN. BURY

NOTE:
ALL DRIVEWAYS SHALL HAVE A MINIMUM CLEAR AND UNOBSTRUCTED WIDTH OF TWENTY FEET.
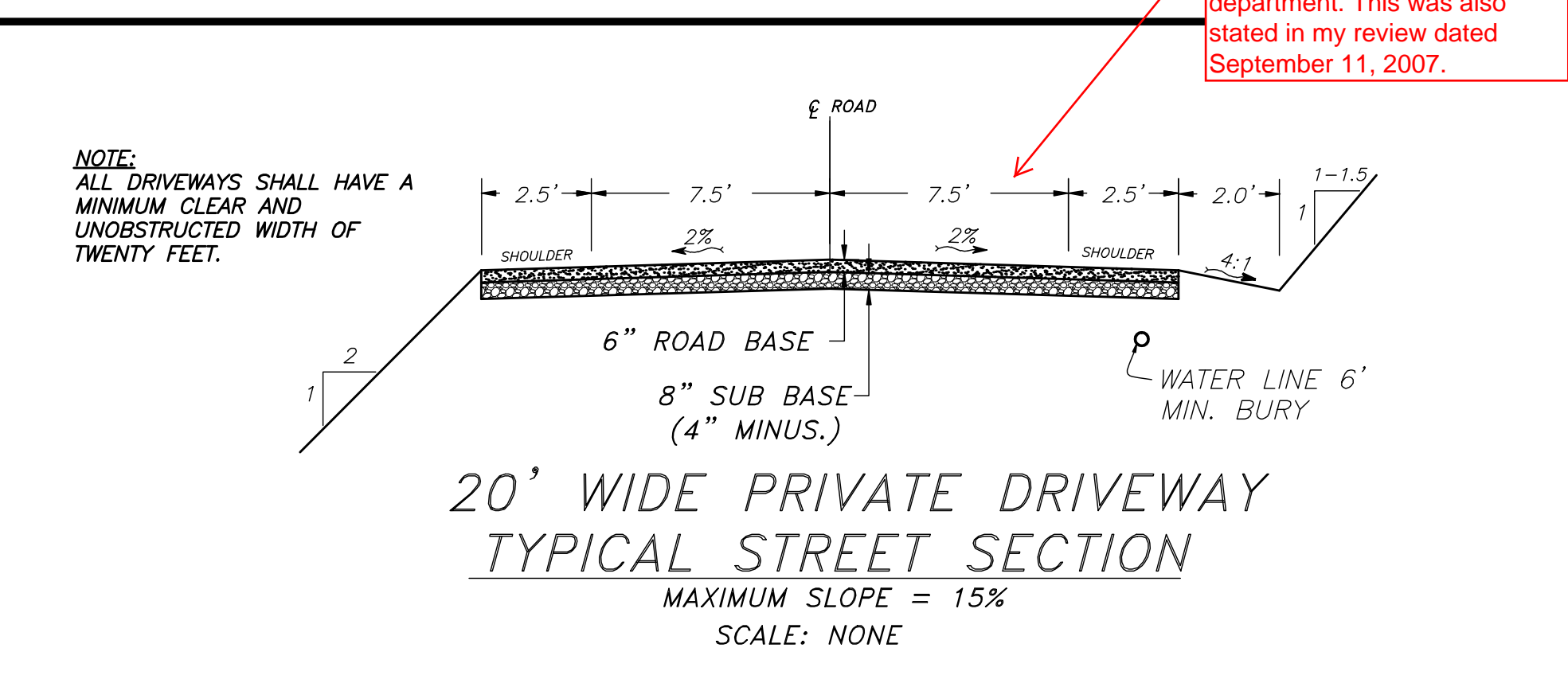
20' WIDE PRIVATE DRIVEWAY TYPICAL STREET SECTION
MAXIMUM SLOPE = 15%
SCALE: NONE

Typical Gravity Wall with 41" Blocks
No Scale

SETBACK = 1.25"
(4.0° Batter Angle on Wall)

Note:
Load Condition A Shown
(No Backslope - No Surcharge)

28" Top Block
Ground Level

Move Blocks Forward During Installation to Engage Shear Knobs (Typical)

41" Middle Block

Free Draining Backfill to Extend at Least 12" Behind Wall

Non-Woven Geotextile Fabric (If Specified)

41" Bottom Block

Perforated Sock Drain (As Specified by Engineer)

Wall Height
Exposed Wall
Ground Level
Bury Depth
Leveling Pad
Crushed Stone Leveling Pad

See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

DRAWN BY	J. JOHNSON	12/08/06	Redi-Rock® International, LLC	
CHECKED BY				
APPROVED BY			DRAWING FILE Typical 41 In Block Gravity Wall.dwg	REVISION —
ISSUE DATE			SCALE NO SCALE	SHEET NO. 1 OF 1

SHEET
10
OF
10
SHEETS

Revision
No.   Date   By